

Fig. 2

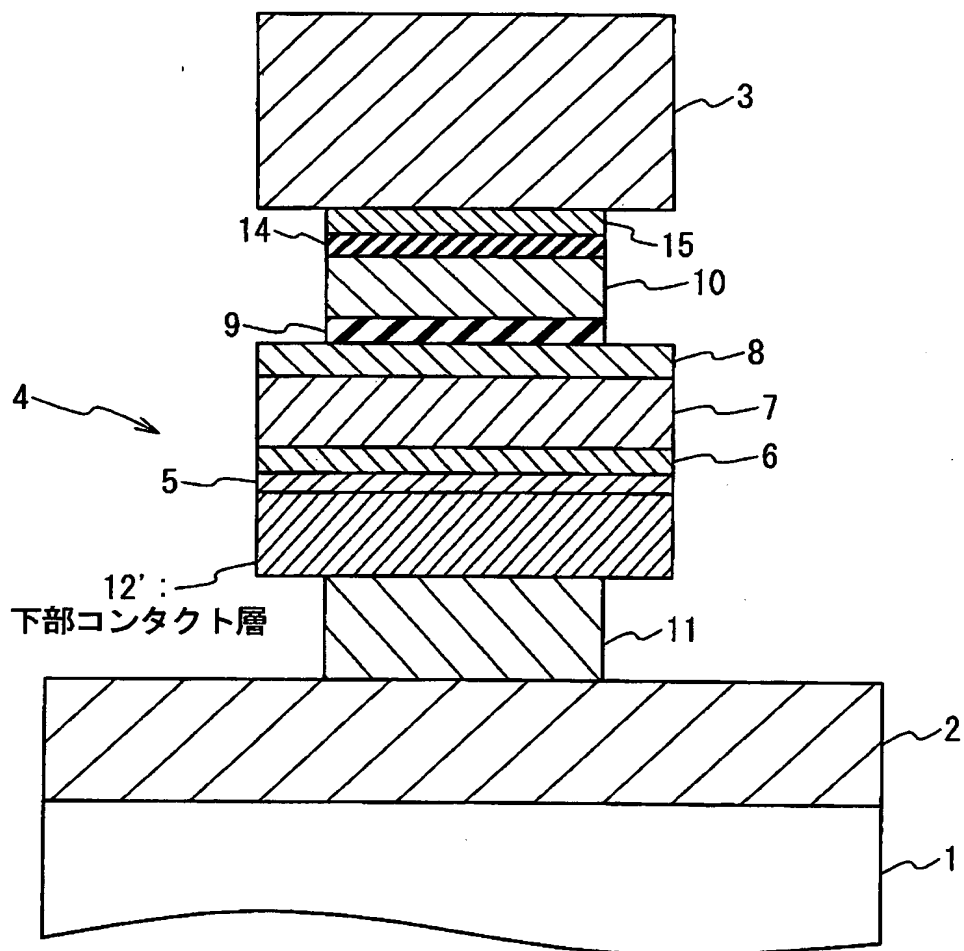


Fig. 3

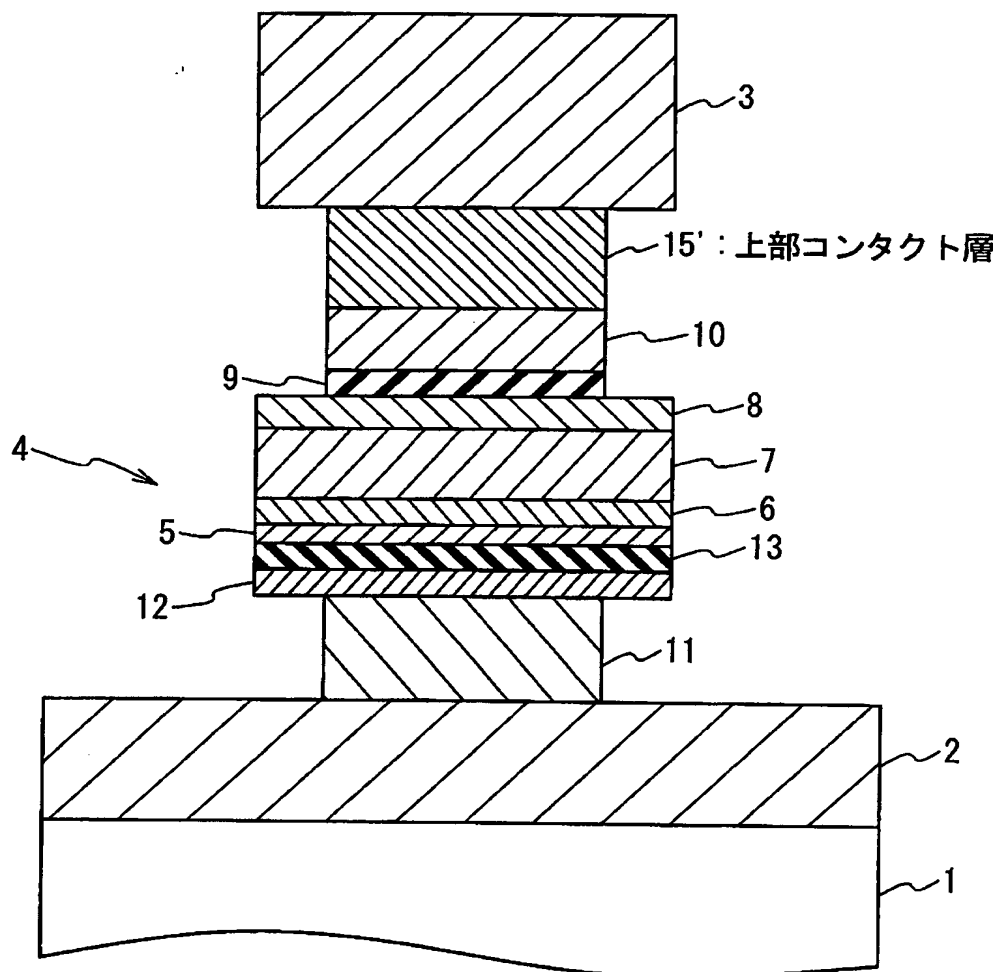


Fig. 4

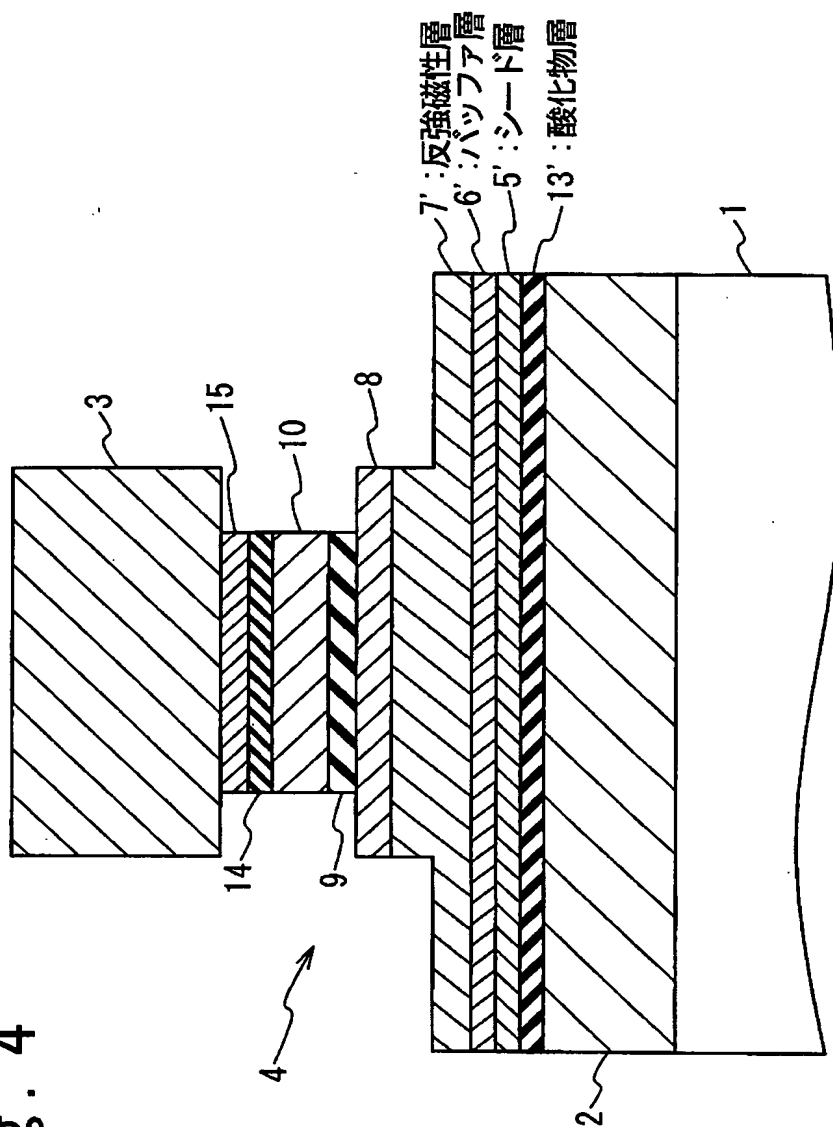


Fig. 5

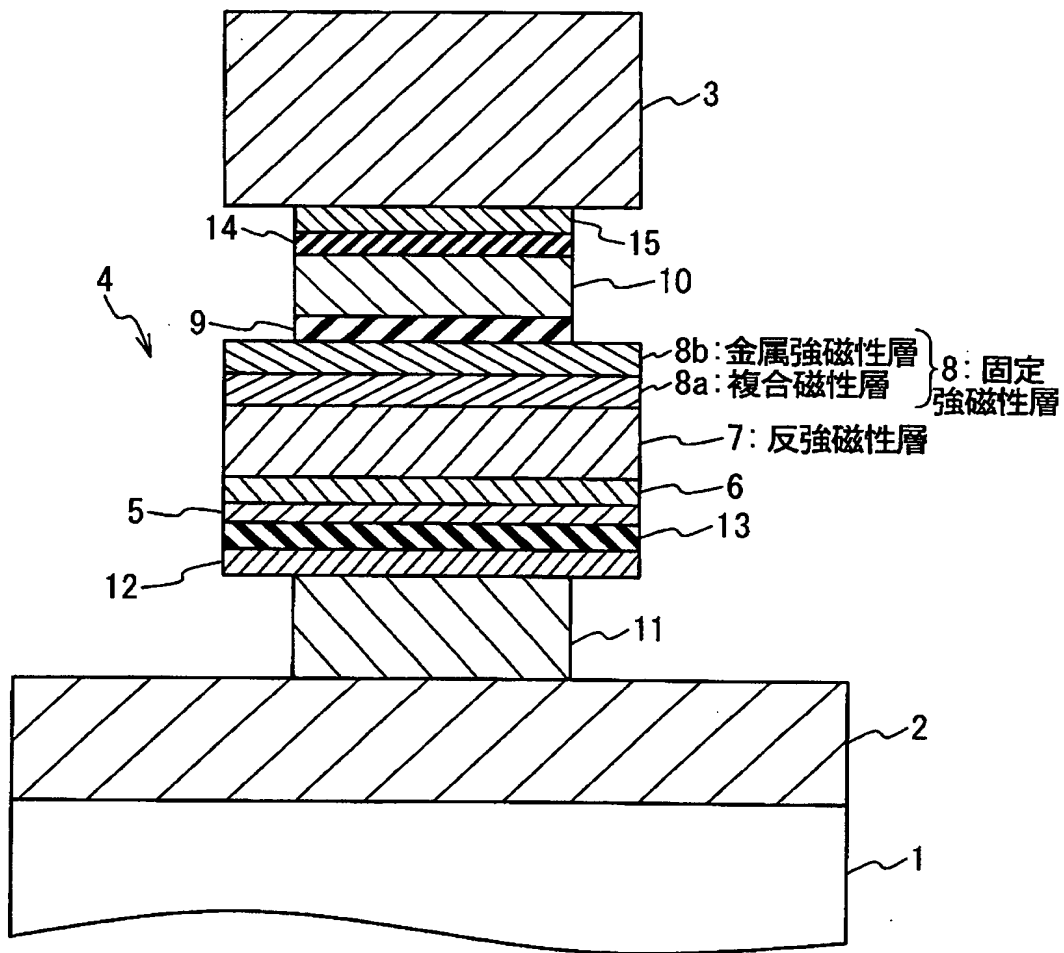


Fig. 6A

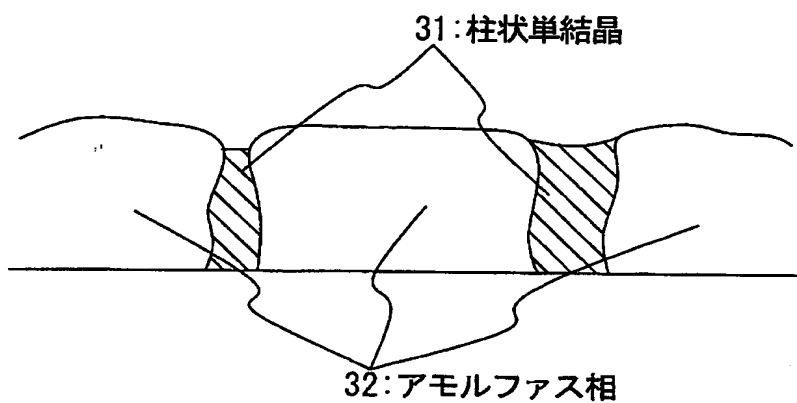


Fig. 6B

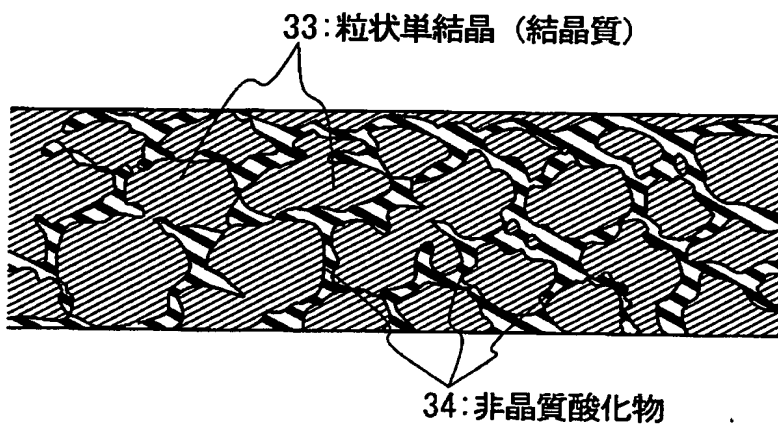


Fig. 7

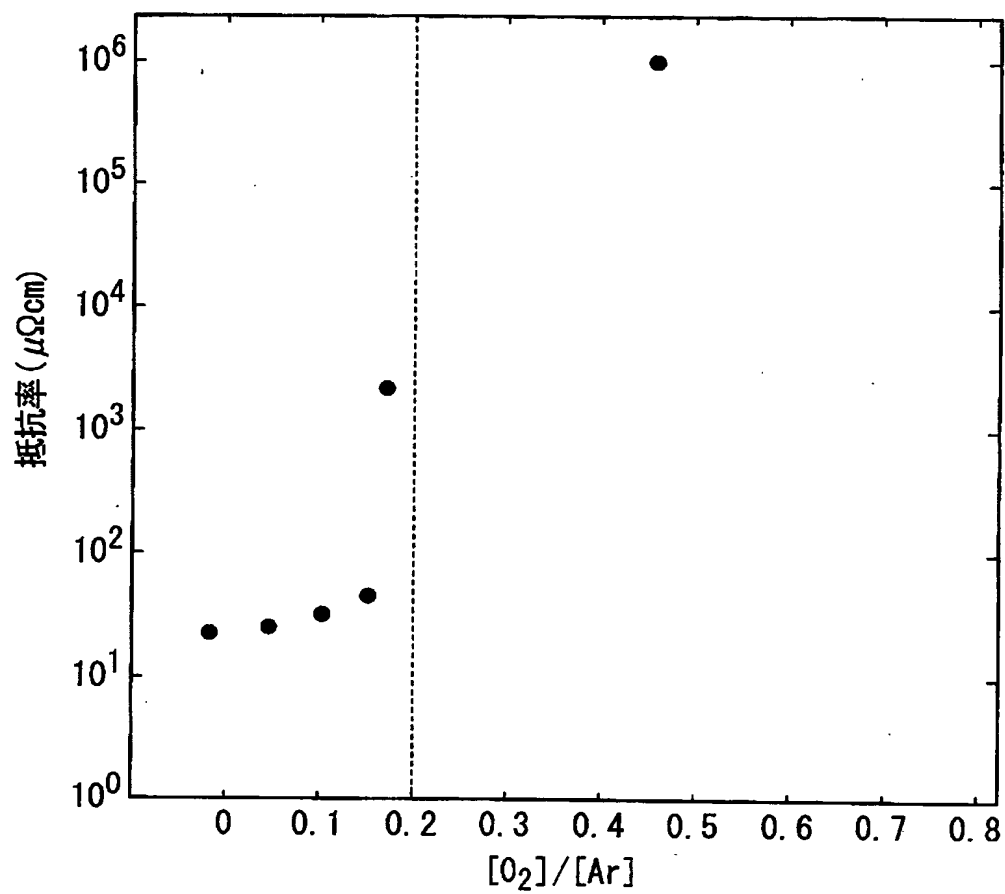


Fig. 8

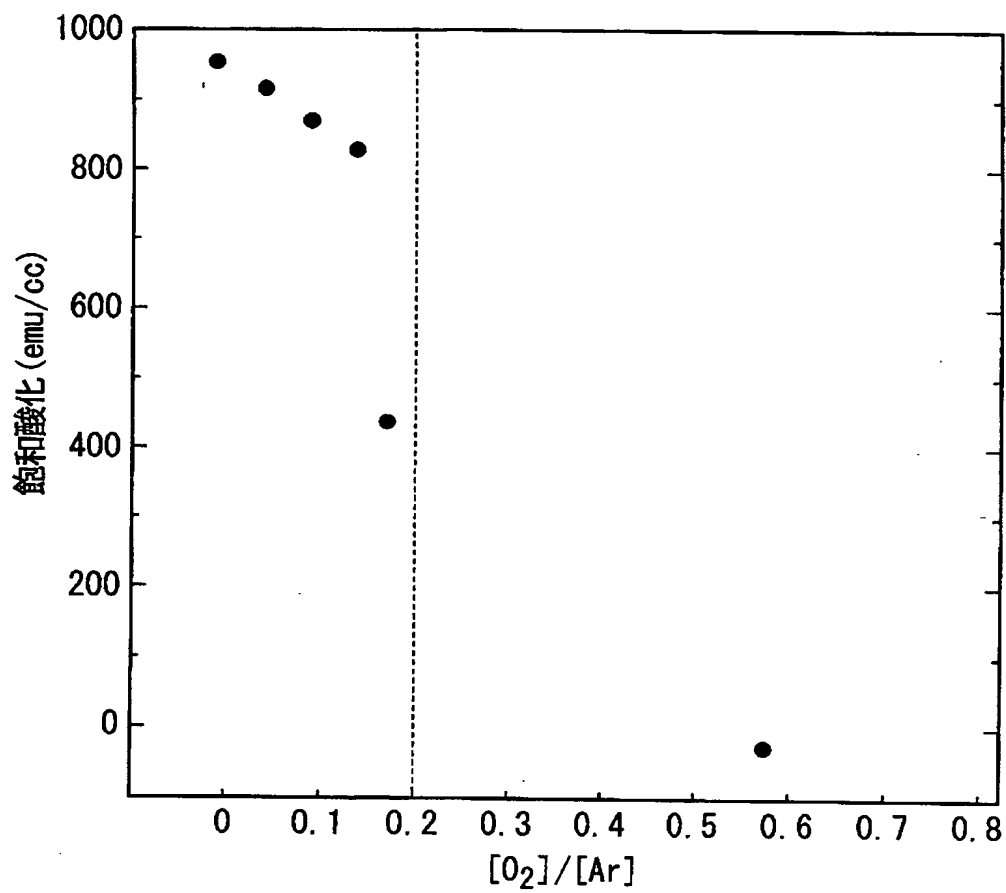


Fig. 9

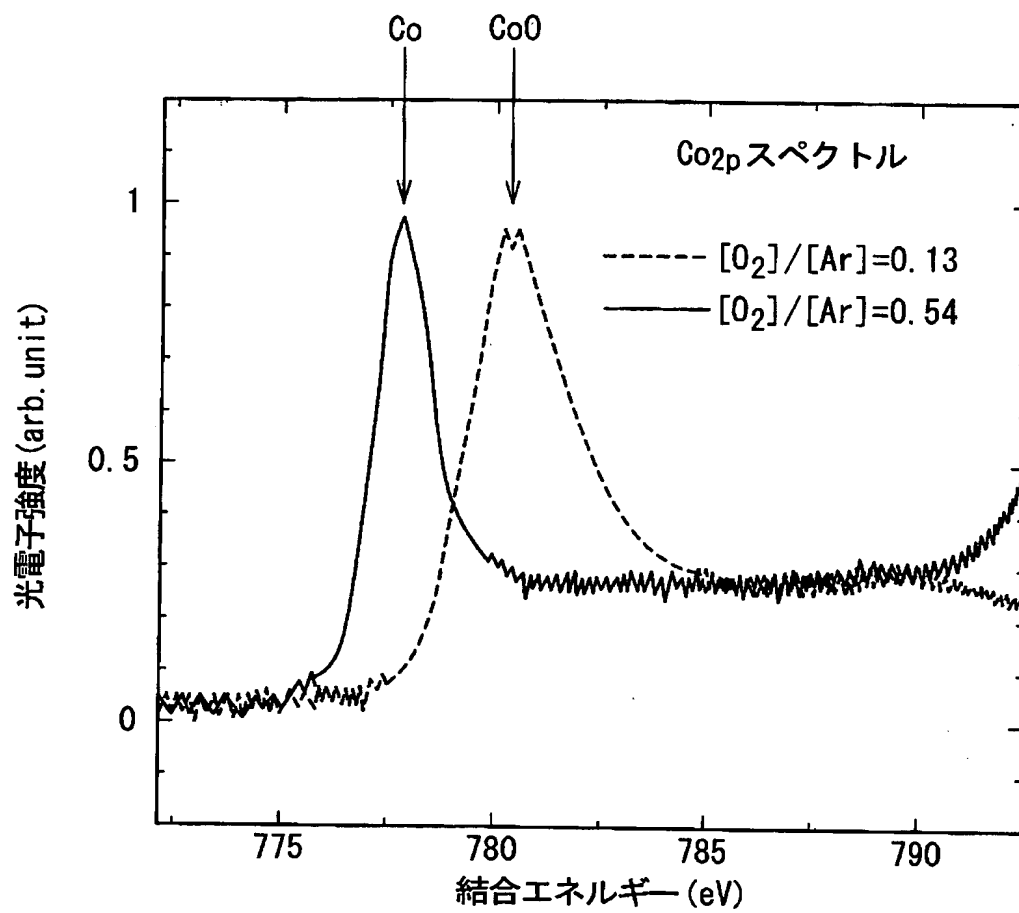


Fig. 10

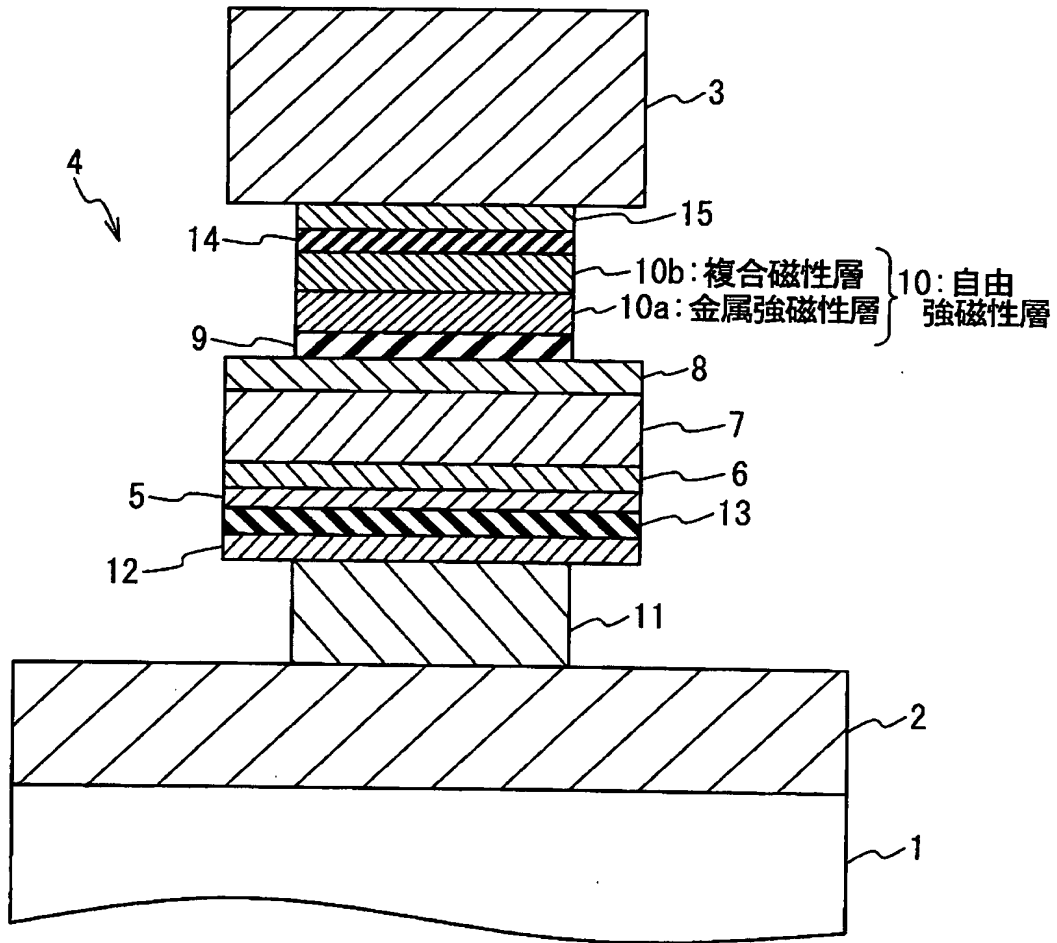


Fig. 11

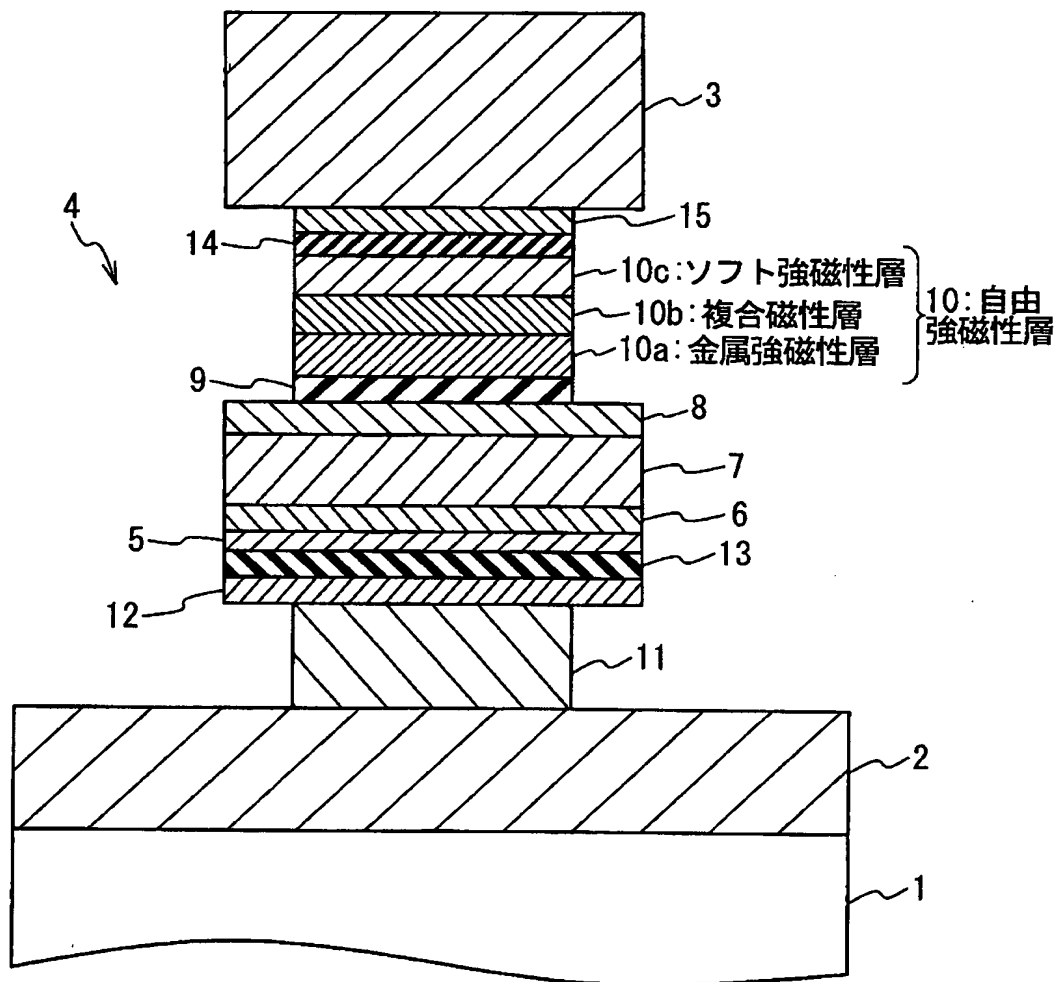


Fig. 12

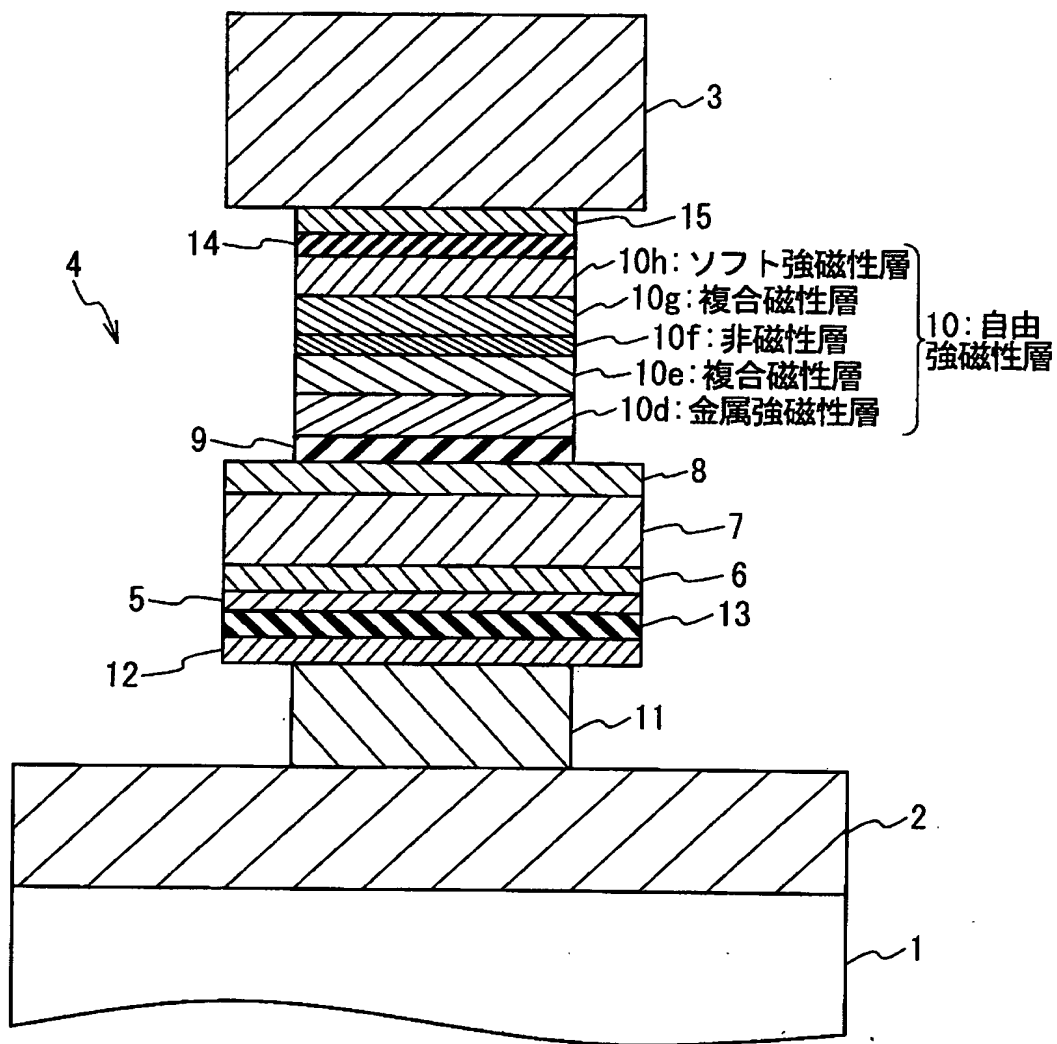


Fig. 13

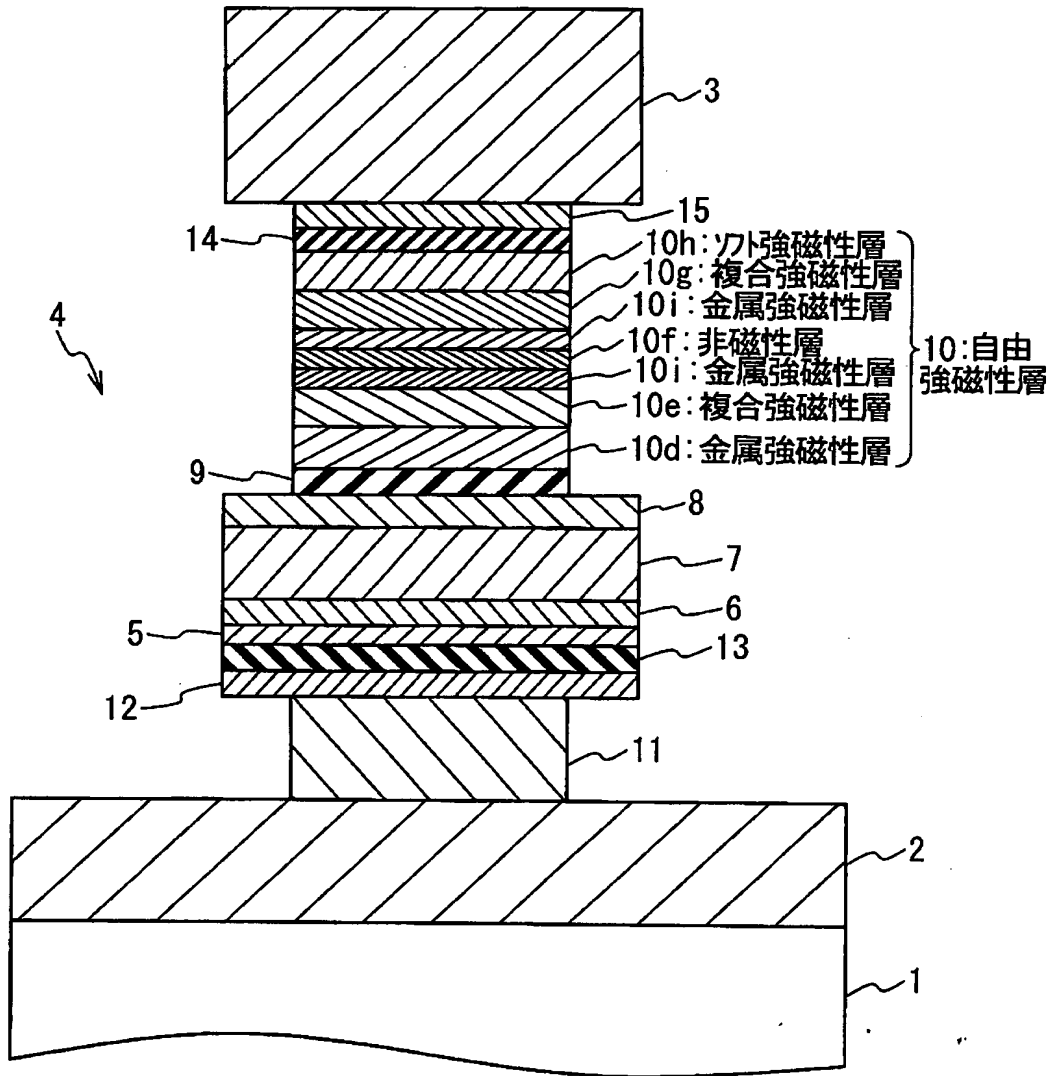


Fig. 14

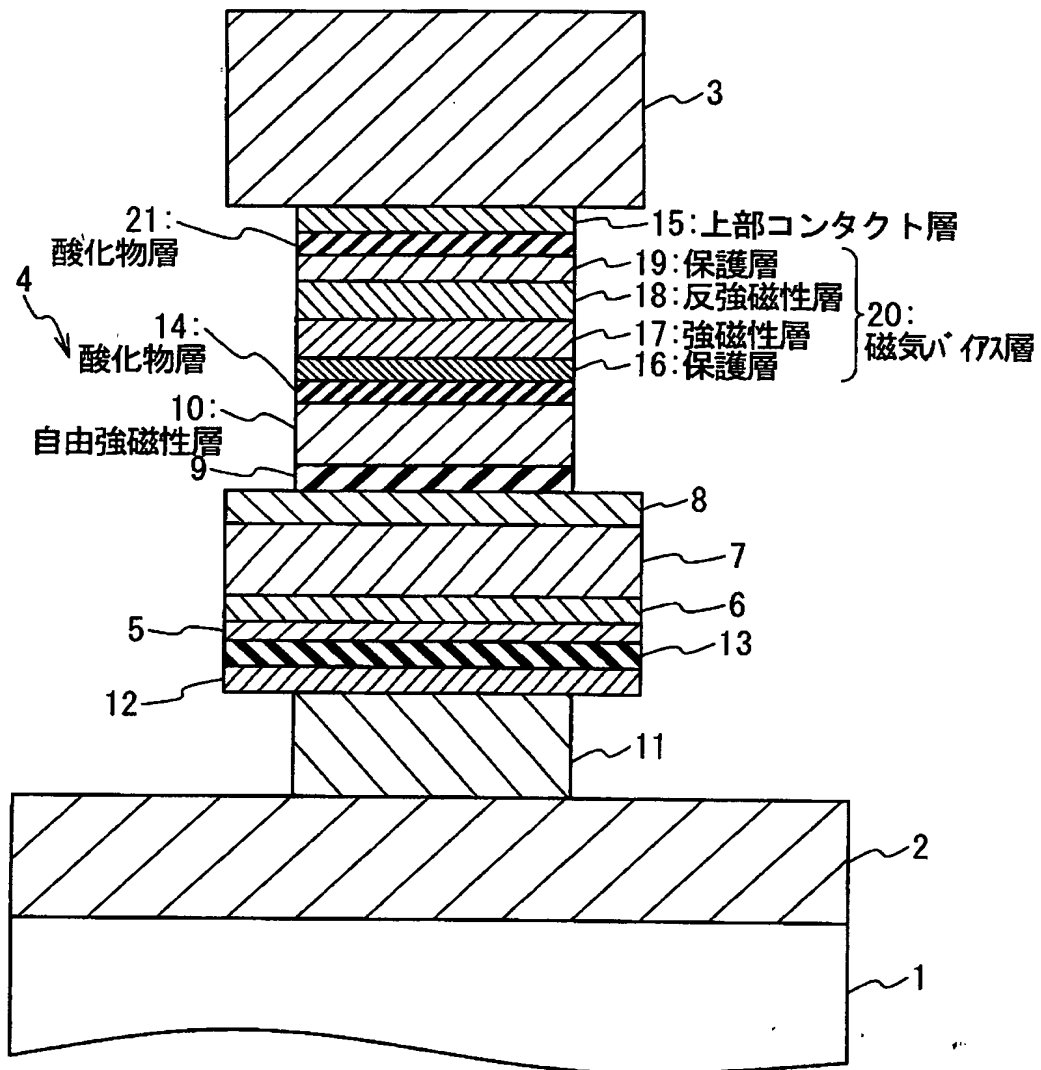
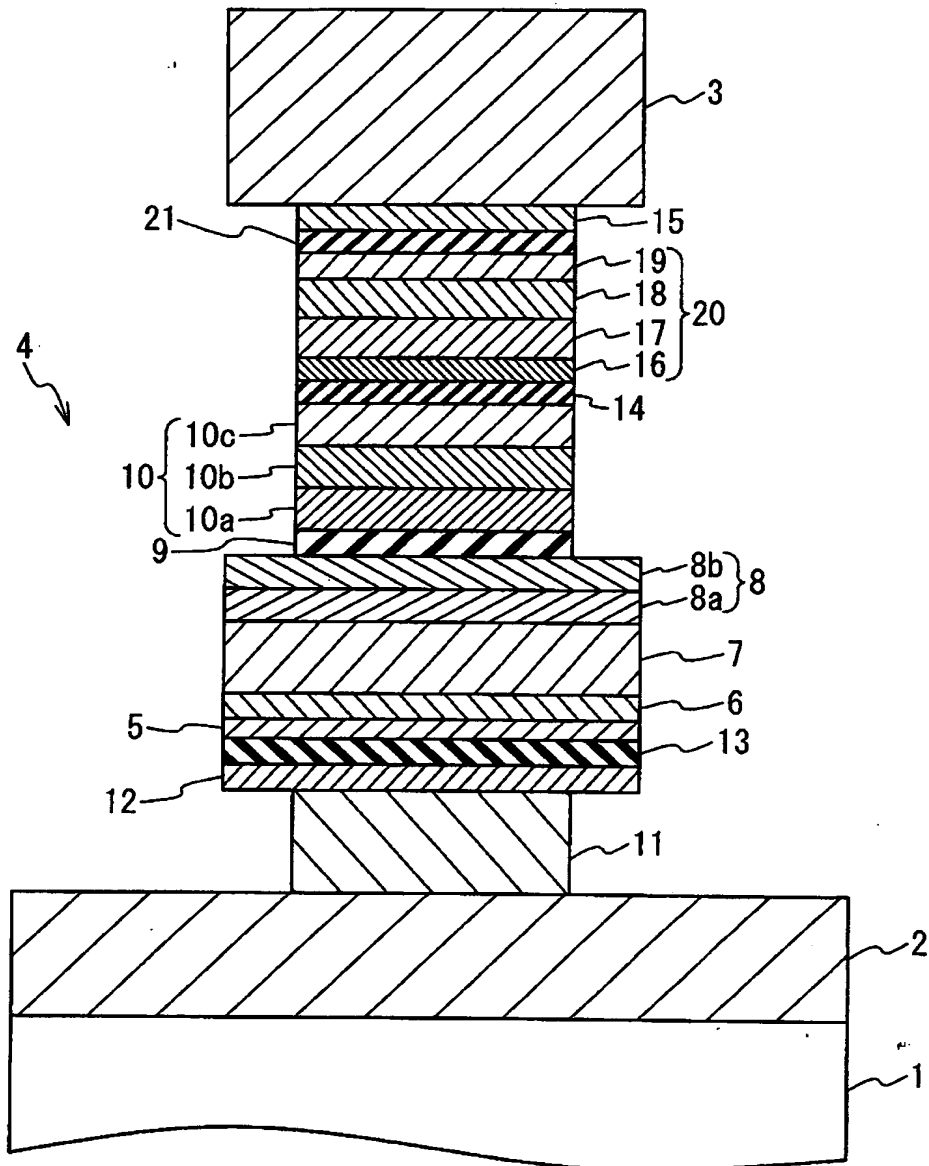
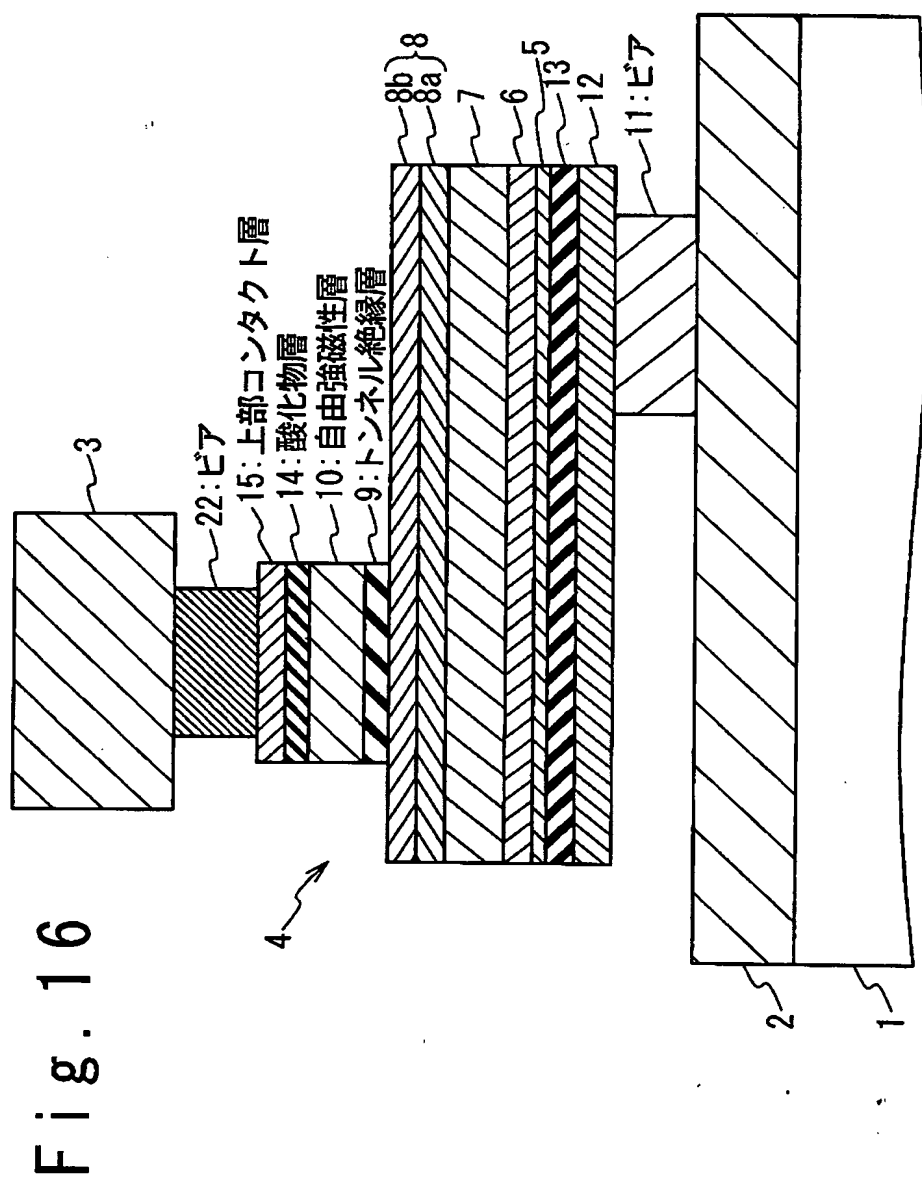


Fig. 15





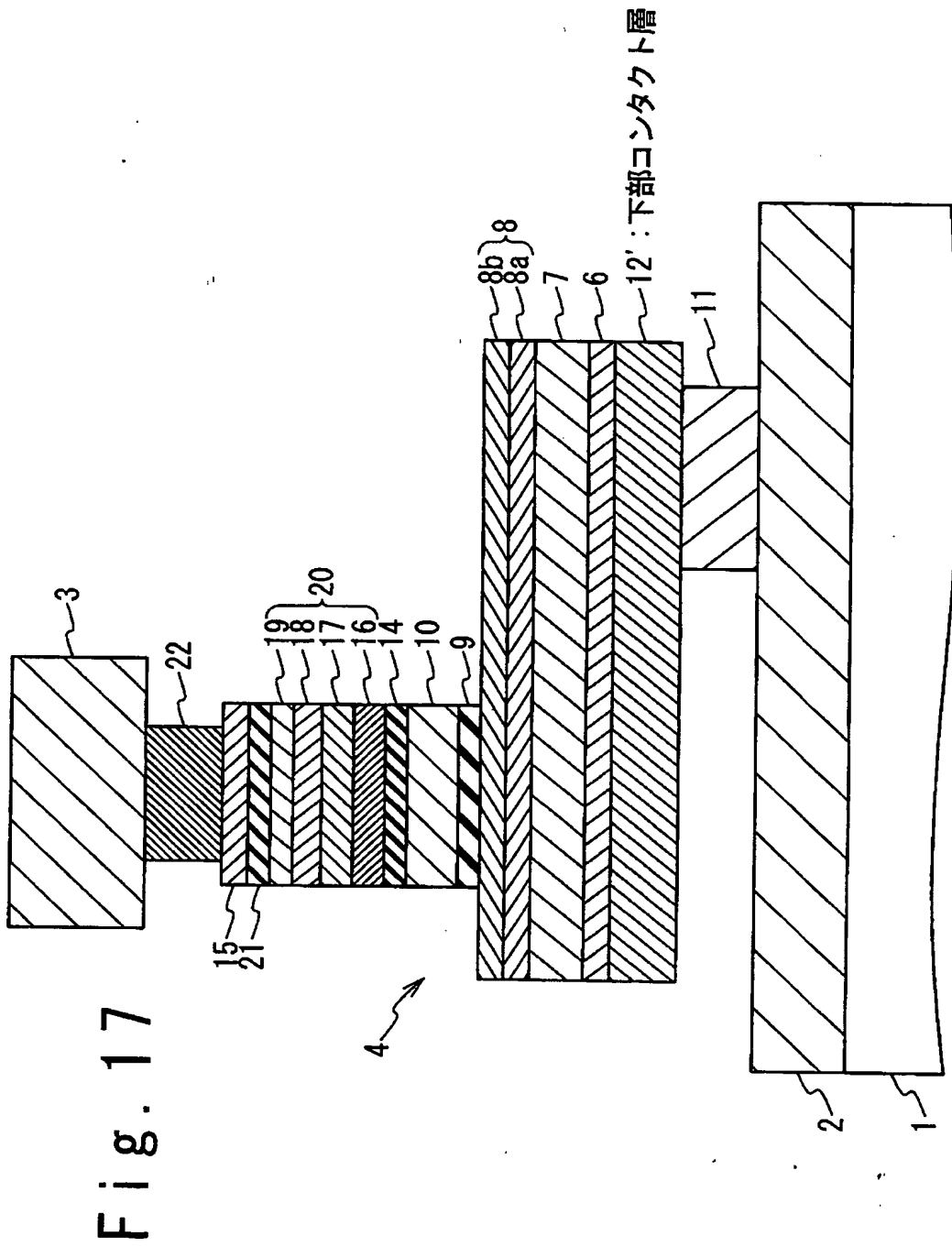


Fig. 18

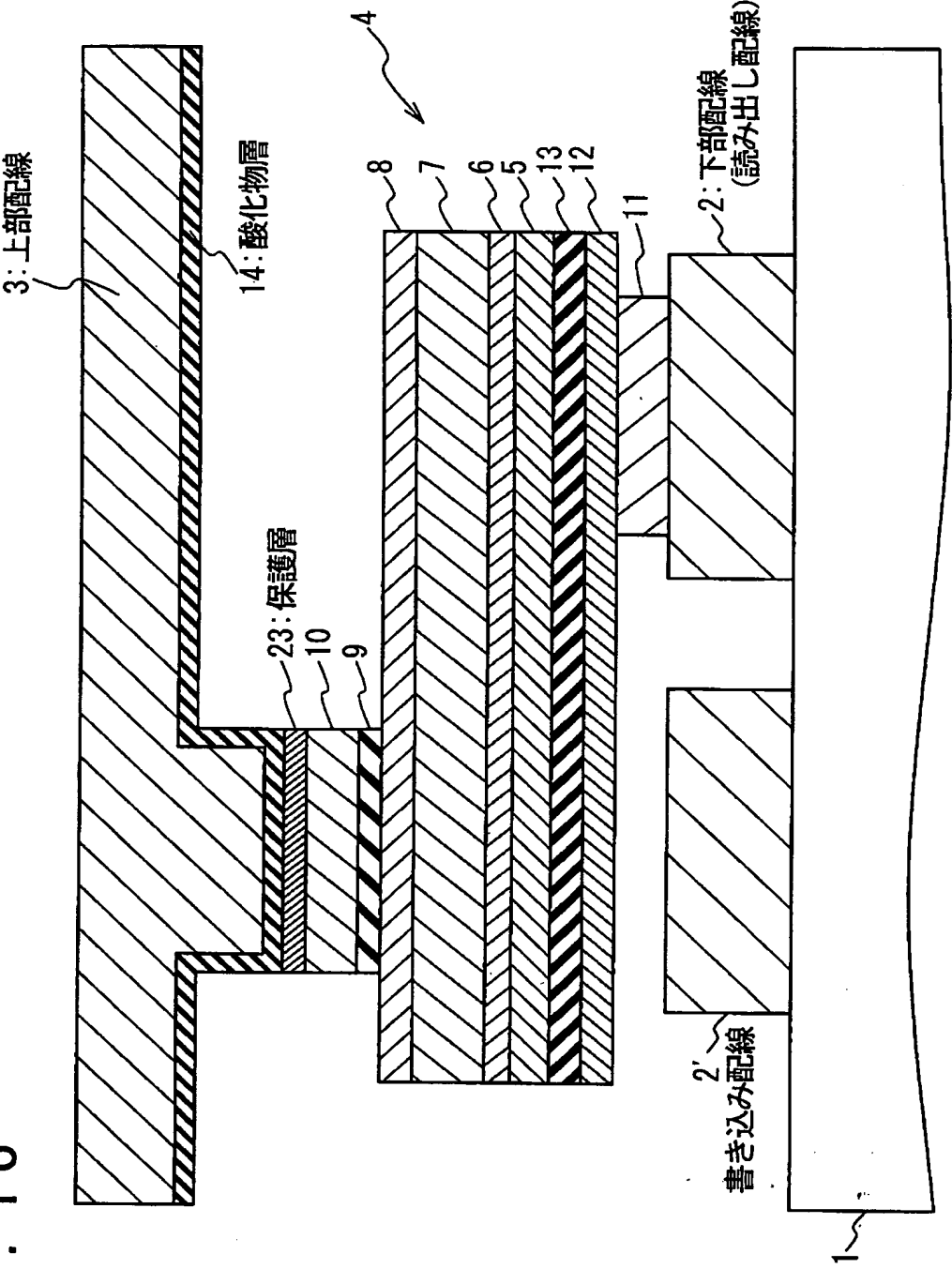


Fig. 19

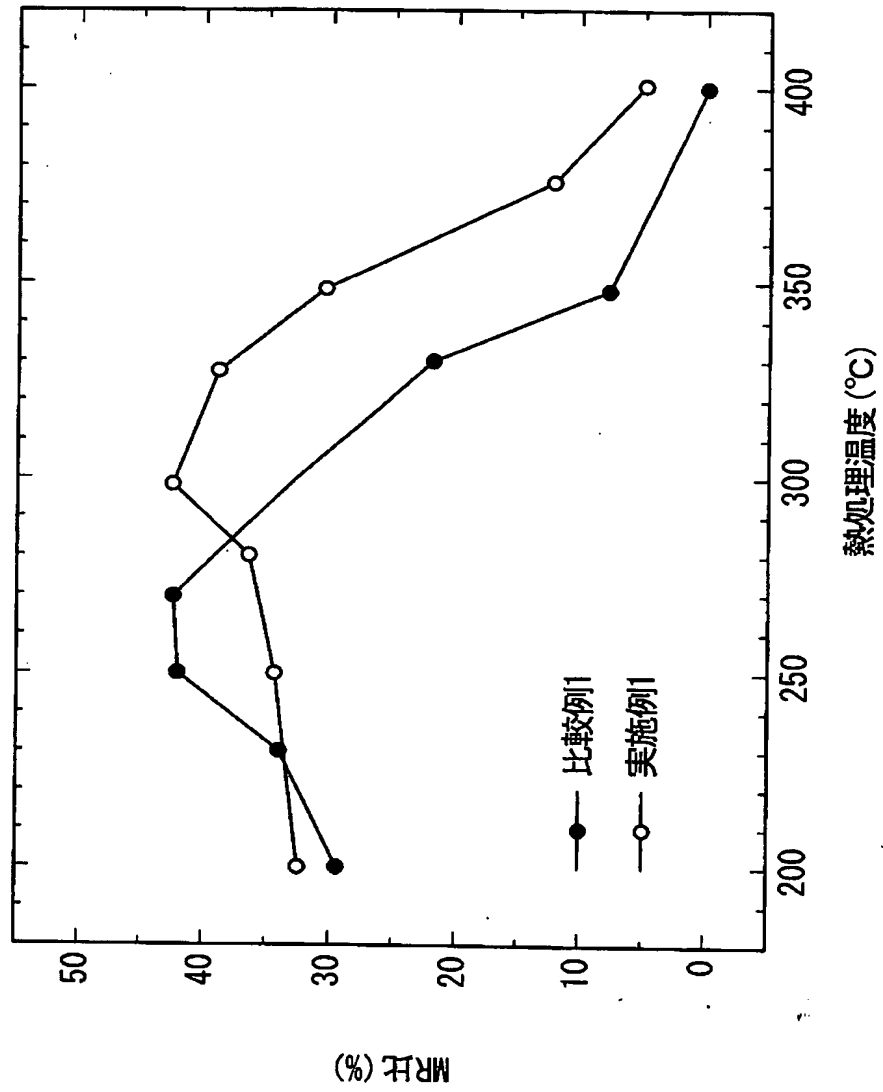


Fig. 20

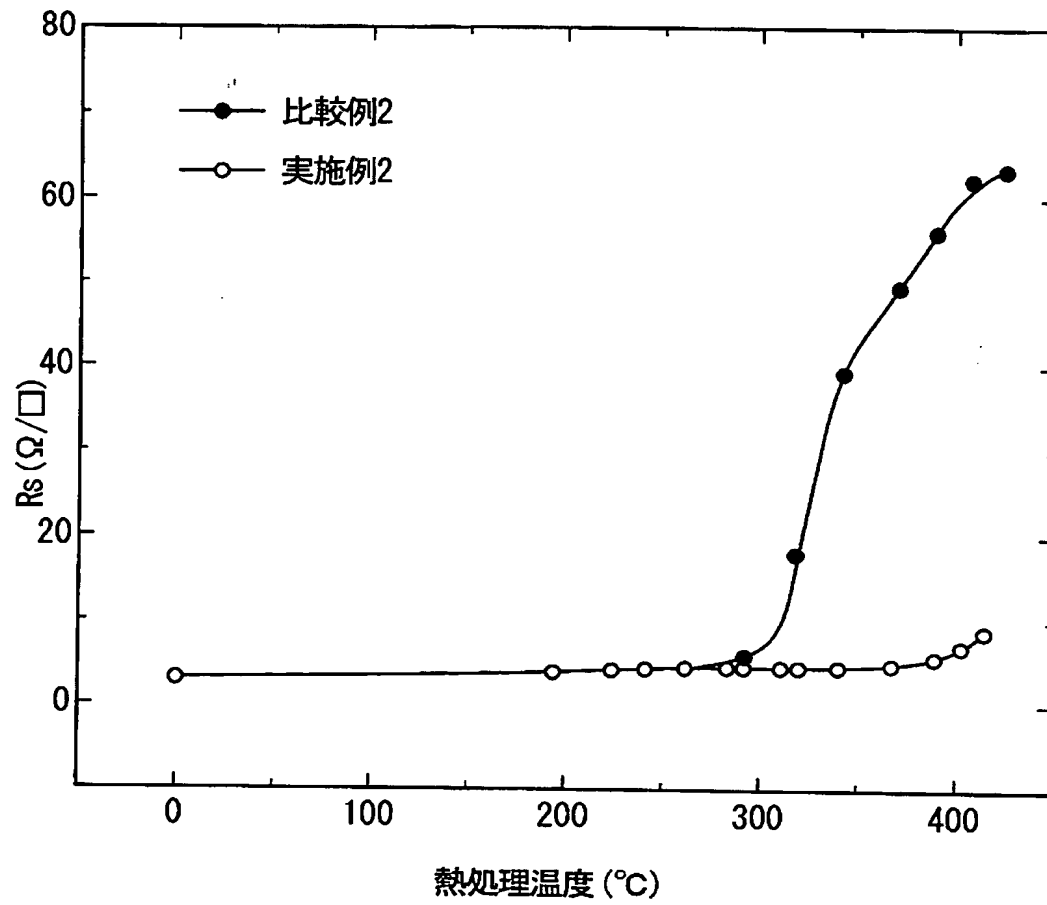


Fig. 21

| | 酸化物層13 に対応する 層 | 熱処理速度と熱処理後のシート抵抗(Ω/\square) | | | |
|------|--------------------------------------|--------------------------------------|-------|-------|-------|
| | | なし | 300°C | 350°C | 400°C |
| 比較例2 | なし | 4.5 | 6.2 | 44.3 | 53.5 |
| 実施例2 | Al ₂ O ₃ (1nm) | 4.3 | 4.2 | 4 | 5.1 |
| 実施例3 | Mgo (1nm) | 4.7 | 4.2 | 4.5 | 5.1 |

Fig. 22

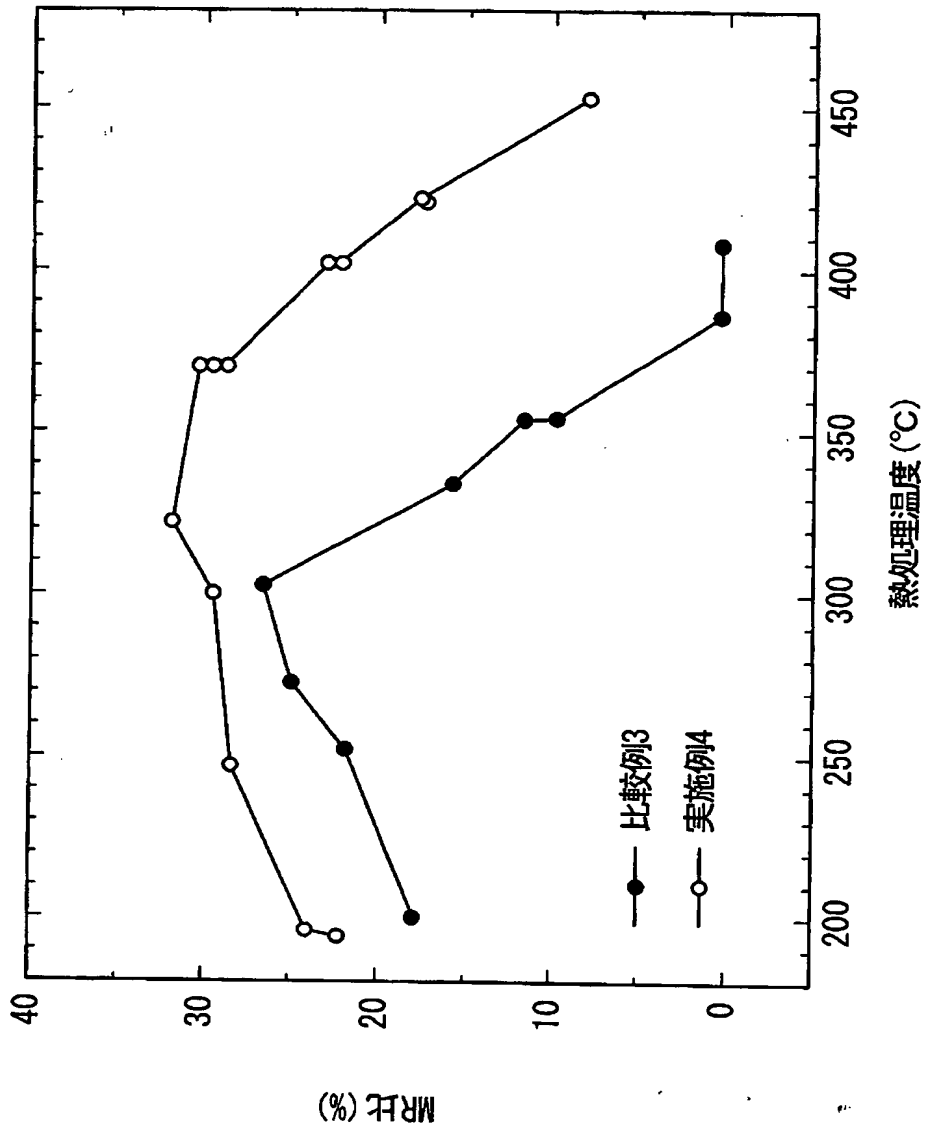


Fig. 23

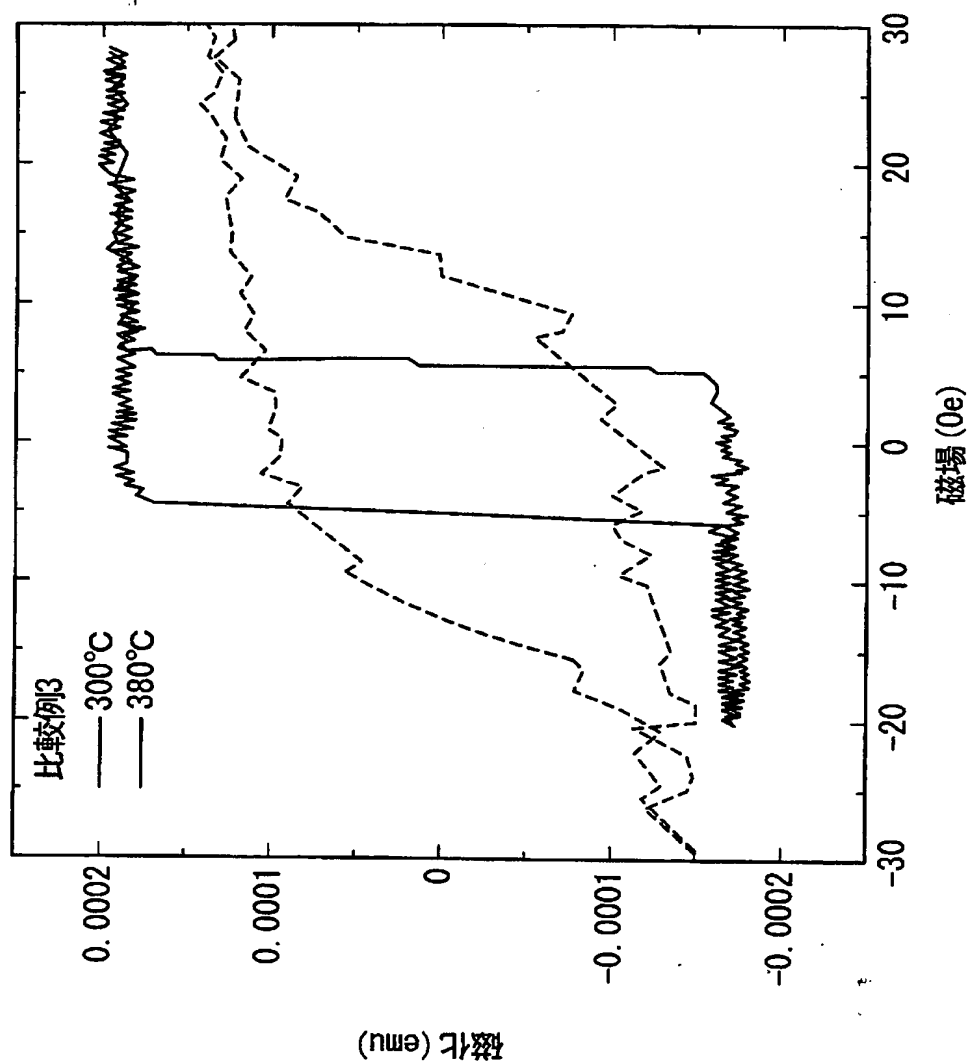


Fig. 24

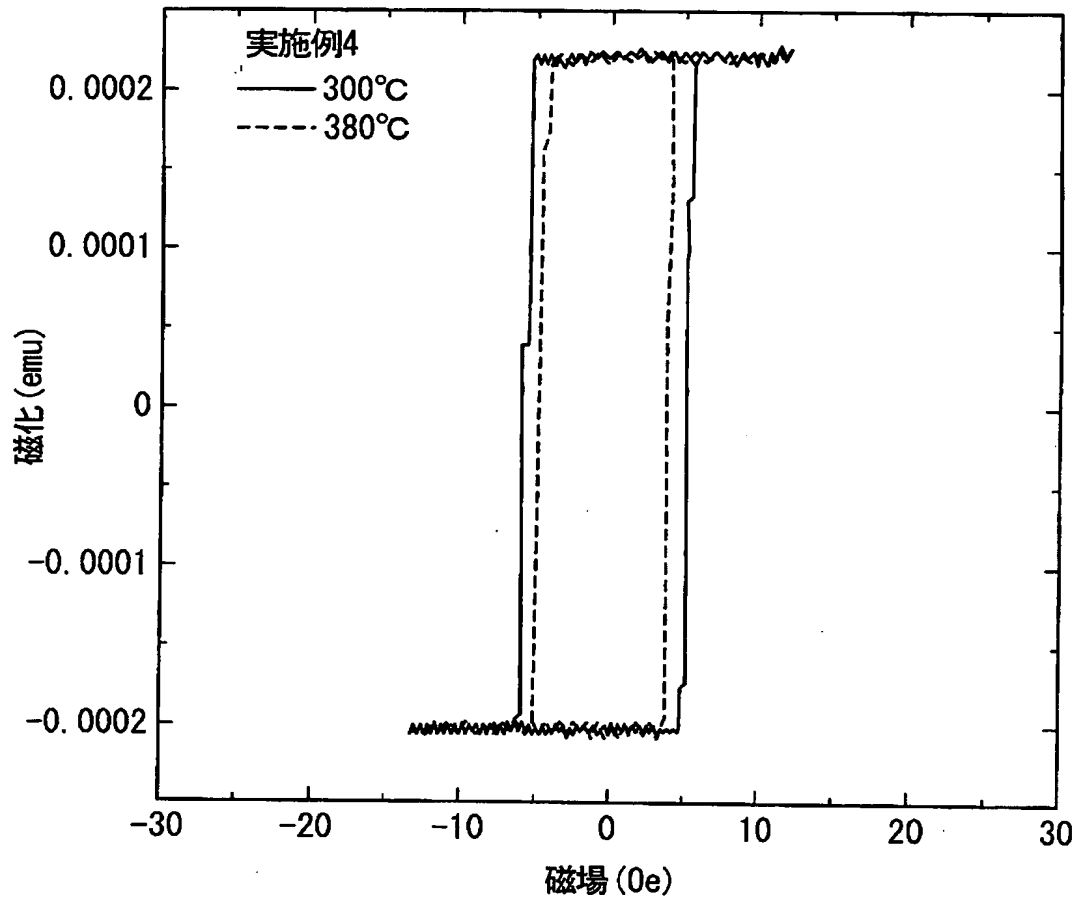
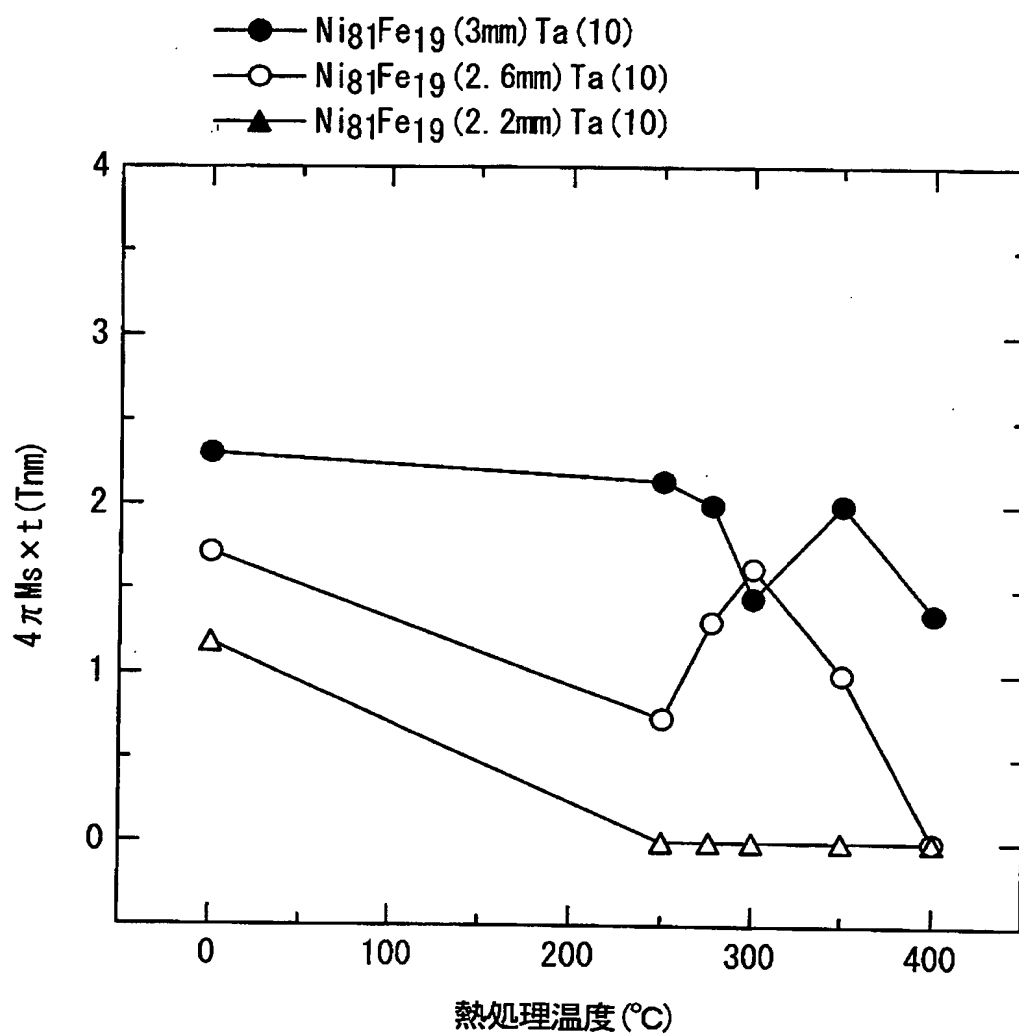


Fig. 25

| | 酸化物層14 に対応する 層 | 熱処理速度と熱処理後の自由層飽和磁化(emu/cc) | | | | |
|------|--------------------------------------|----------------------------|------|------|------|------|
| | | なし | 200℃ | 300℃ | 380℃ | 400℃ |
| 比較例4 | なし | 744 | 736 | 692 | 455 | 35 |
| 比較例5 | なし | 748 | 744 | 724 | 633 | 610 |
| 実施例5 | Al ₂ O ₃ (1nm) | 783 | 787 | 775 | 771 | 772 |
| 実施例6 | Mgo (1nm) | 775 | 771 | 775 | 774 | 773 |

Fig. 26



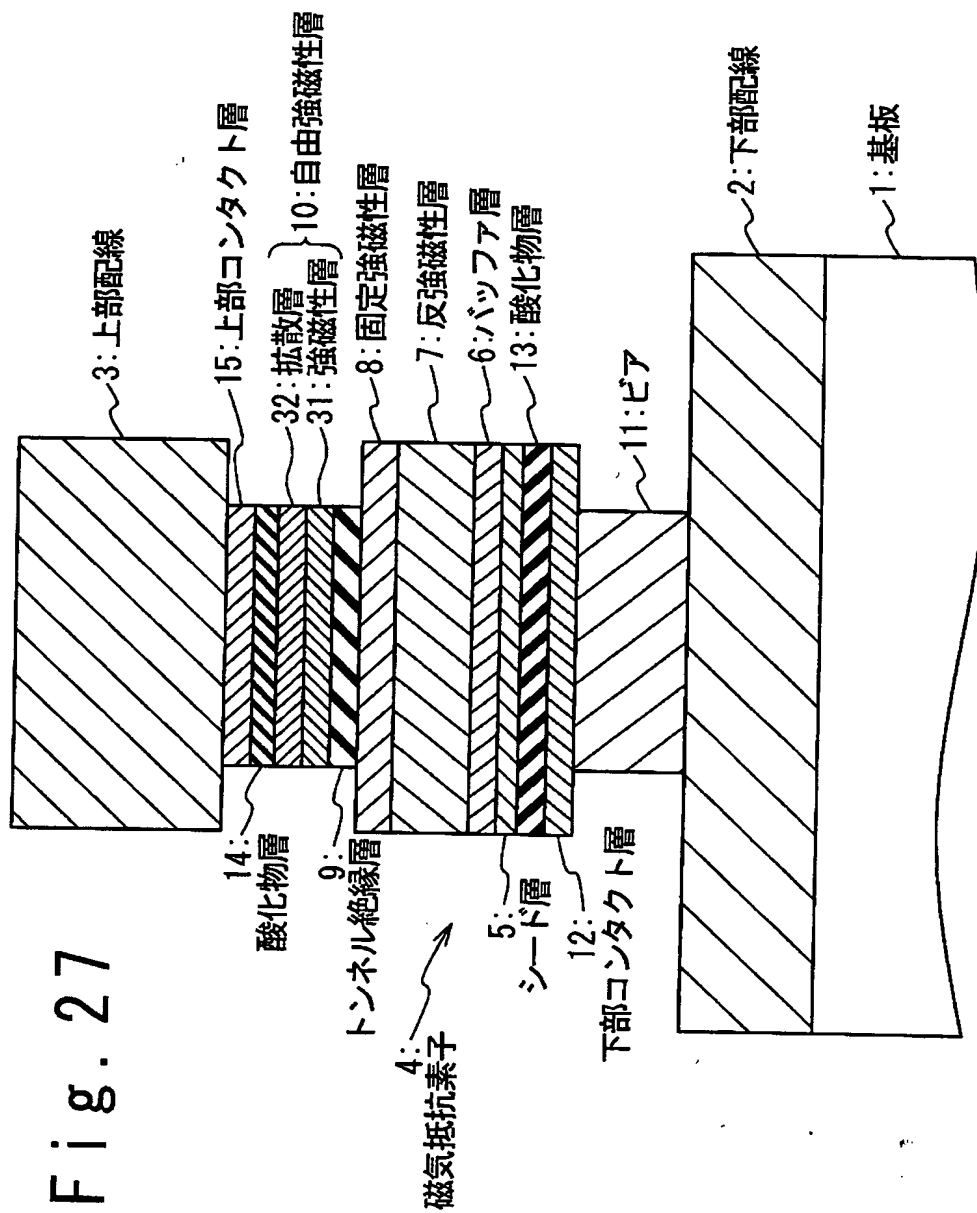


Fig. 28

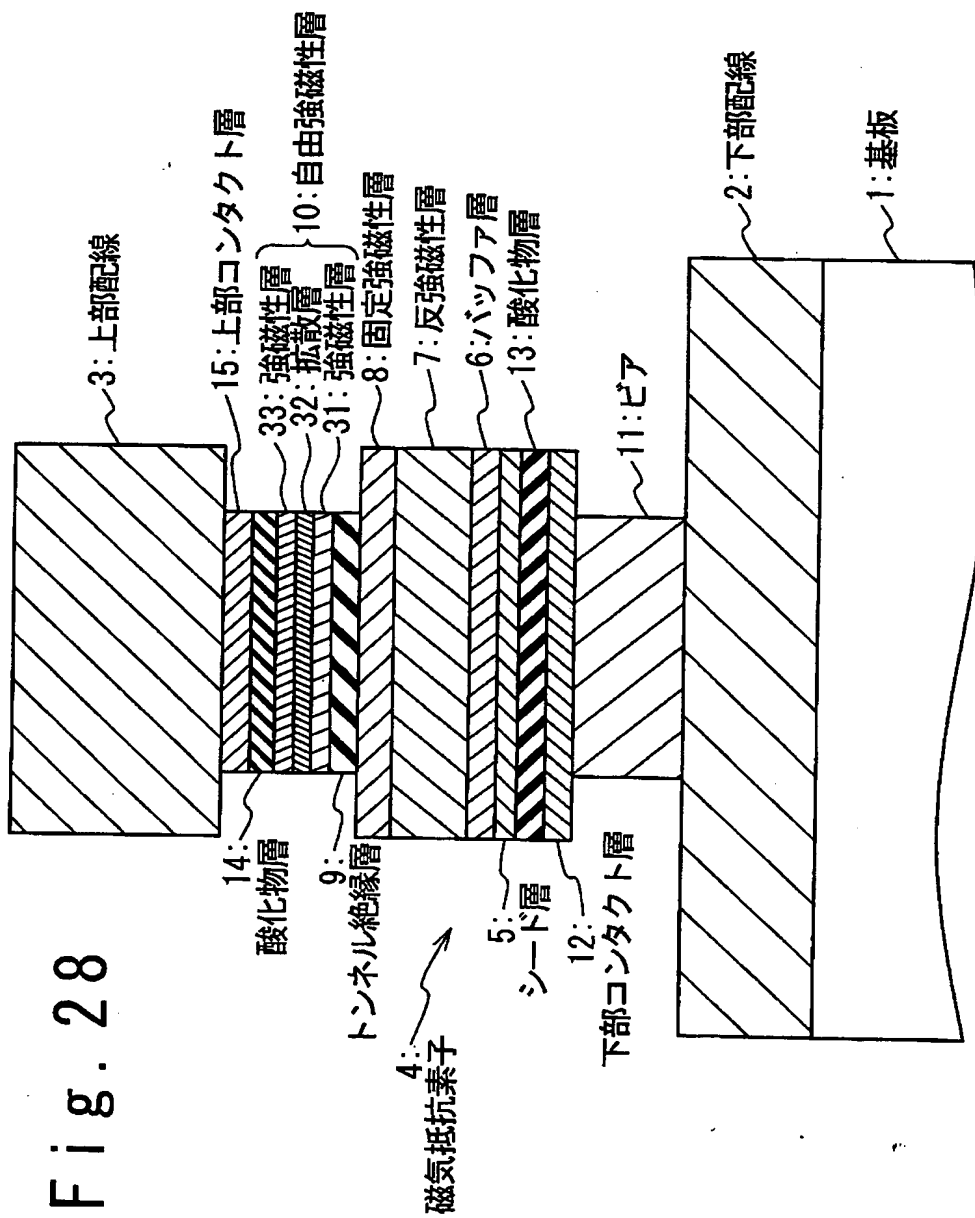


Fig. 29

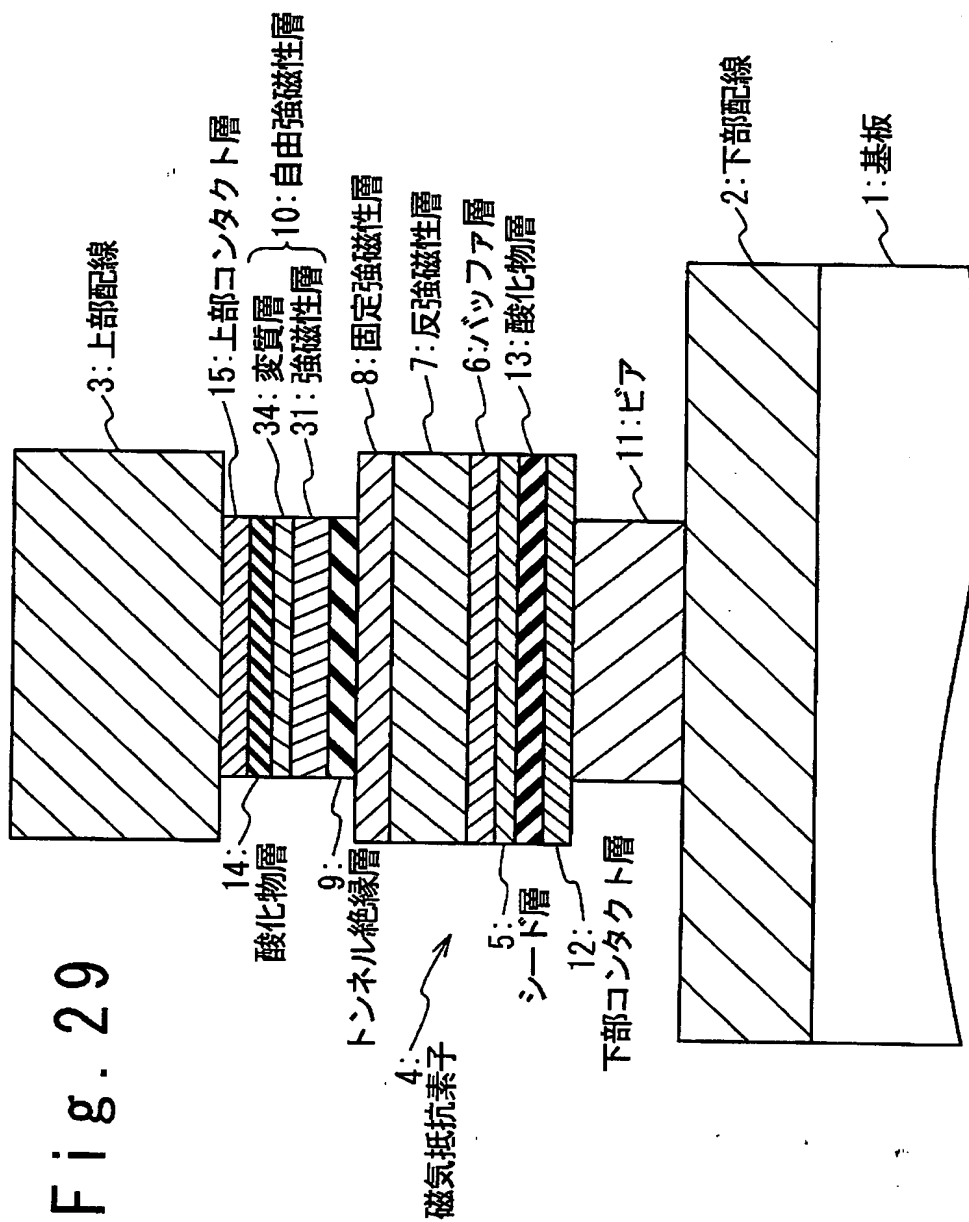
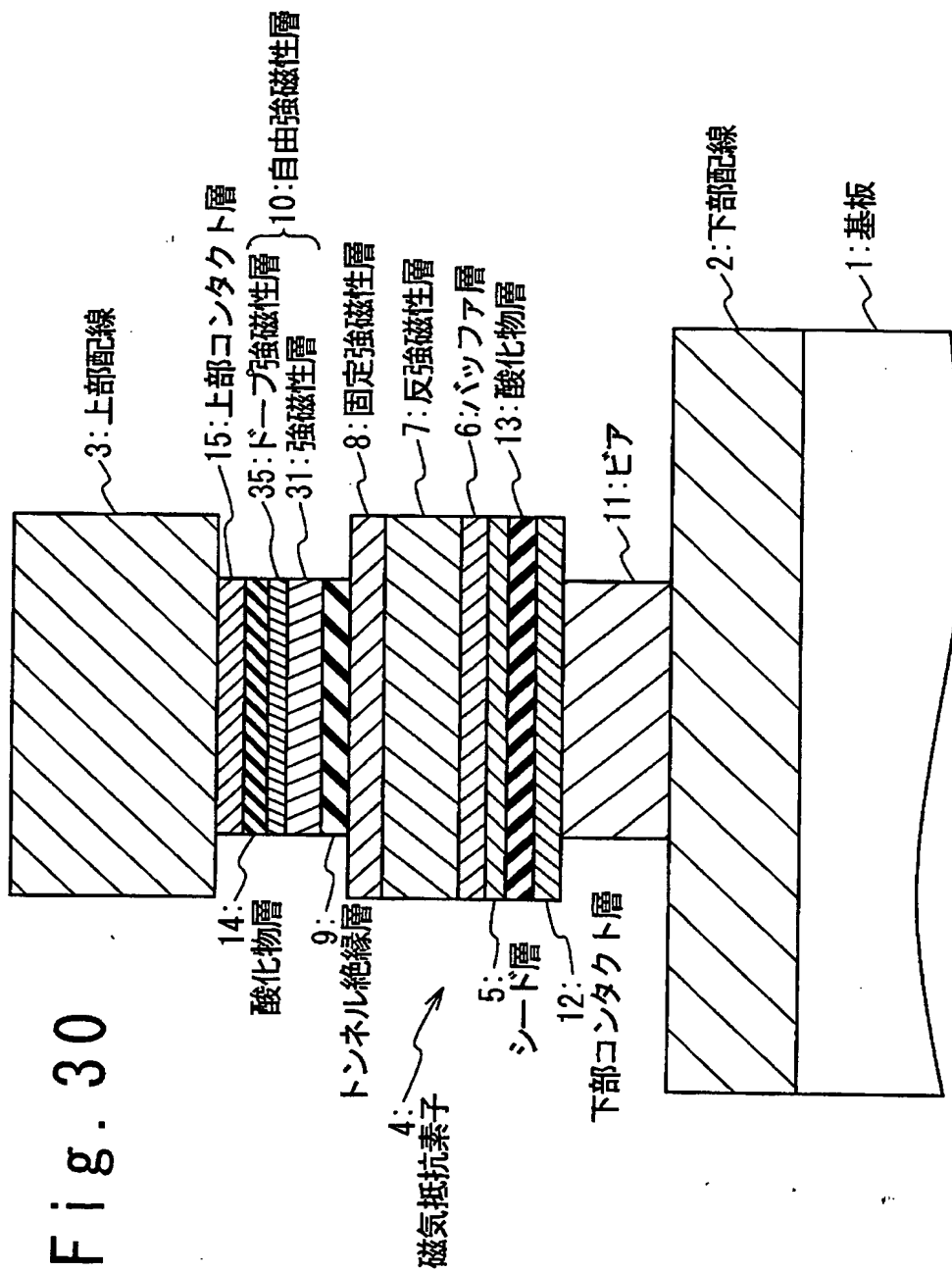


Fig. 30



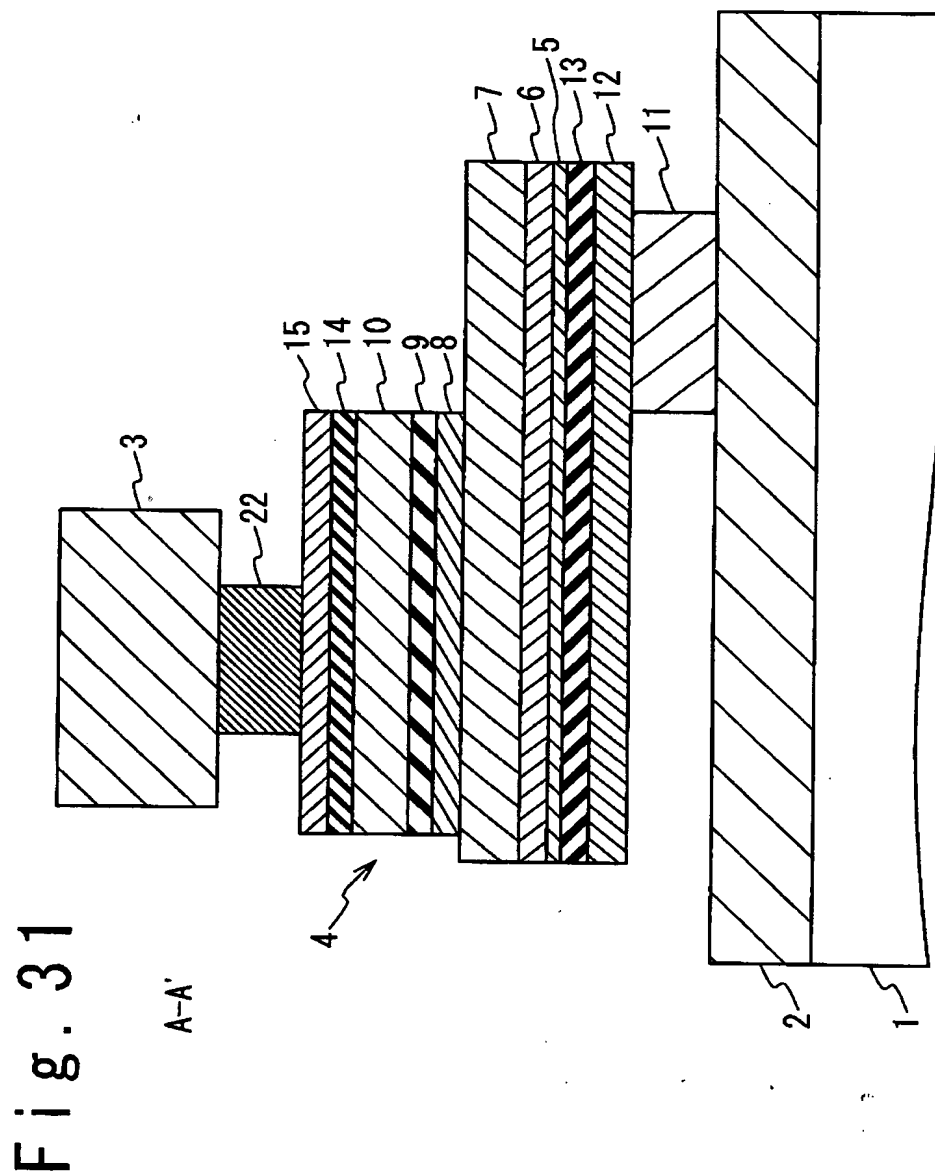


Fig. 32

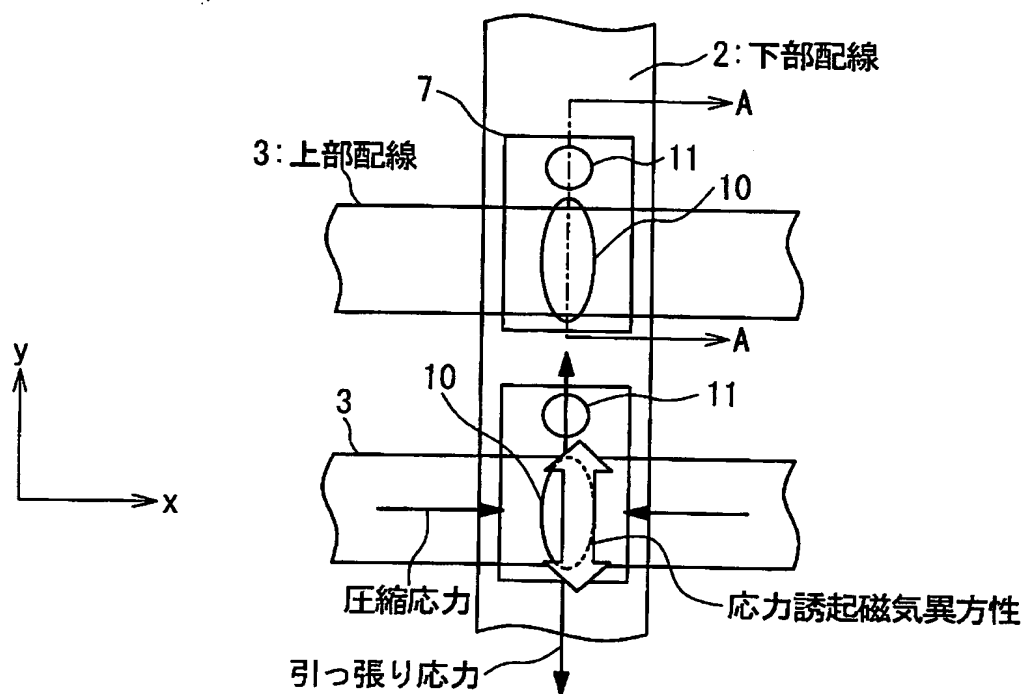
 $\lambda > 0$ 

Fig. 33

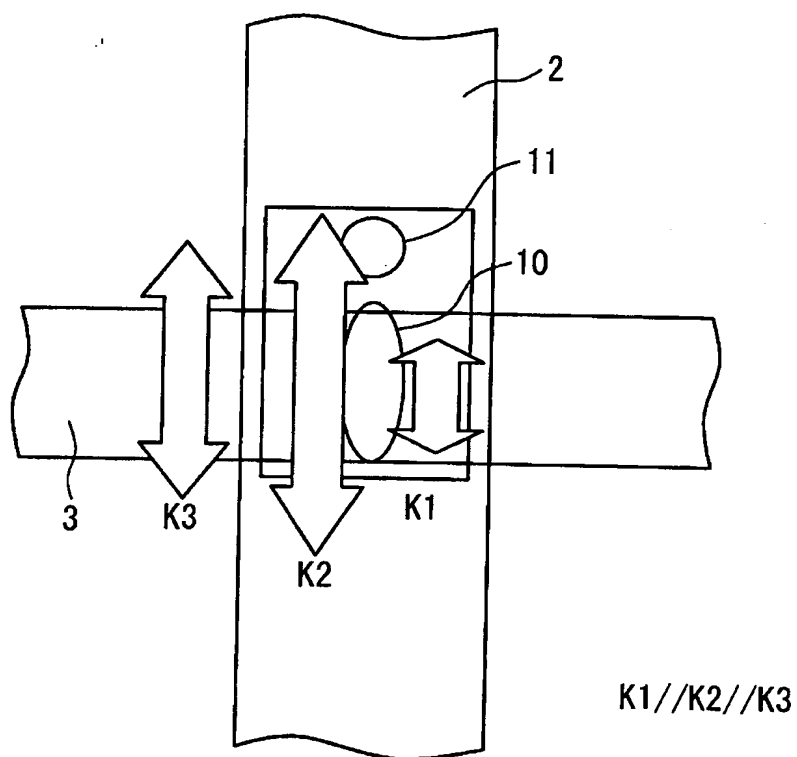


Fig. 34

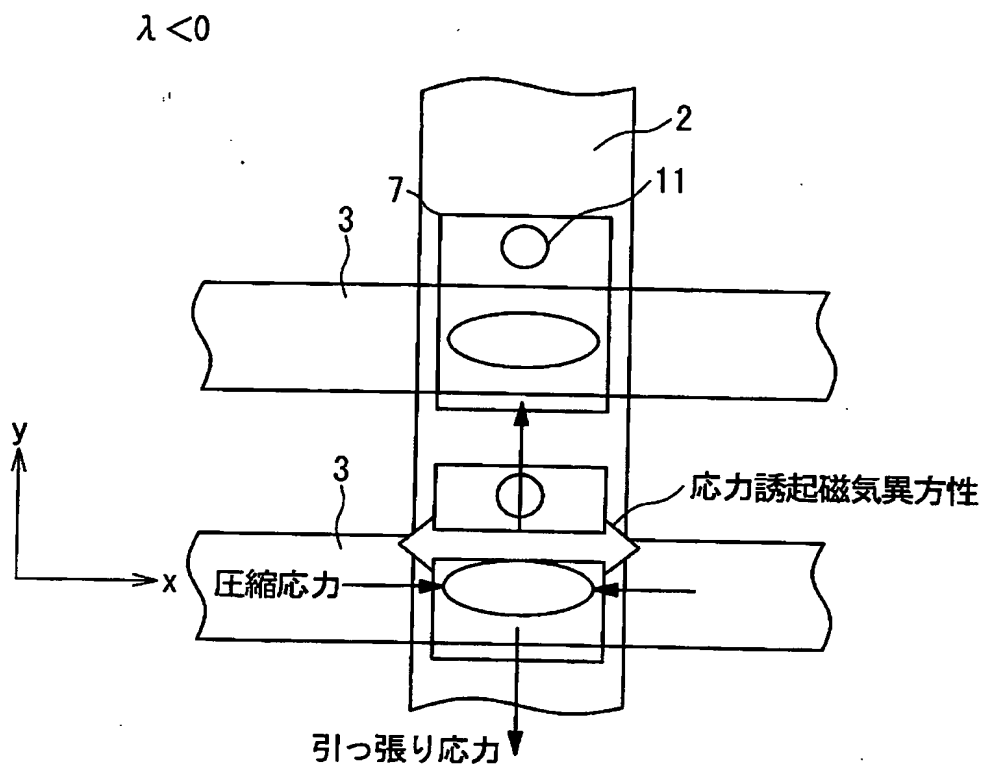


Fig. 35

$\lambda > 0$

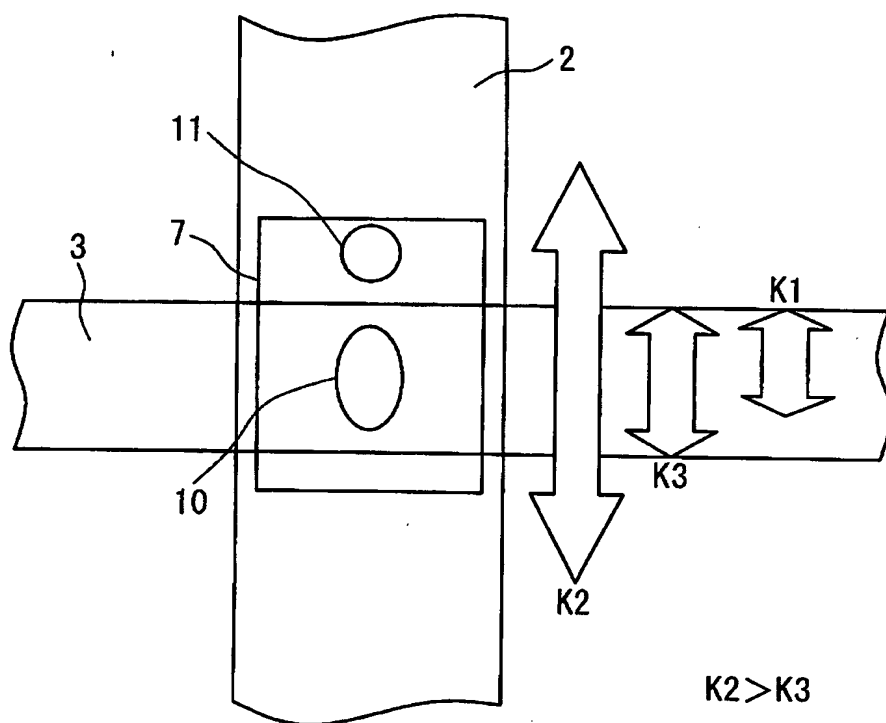


Fig. 36

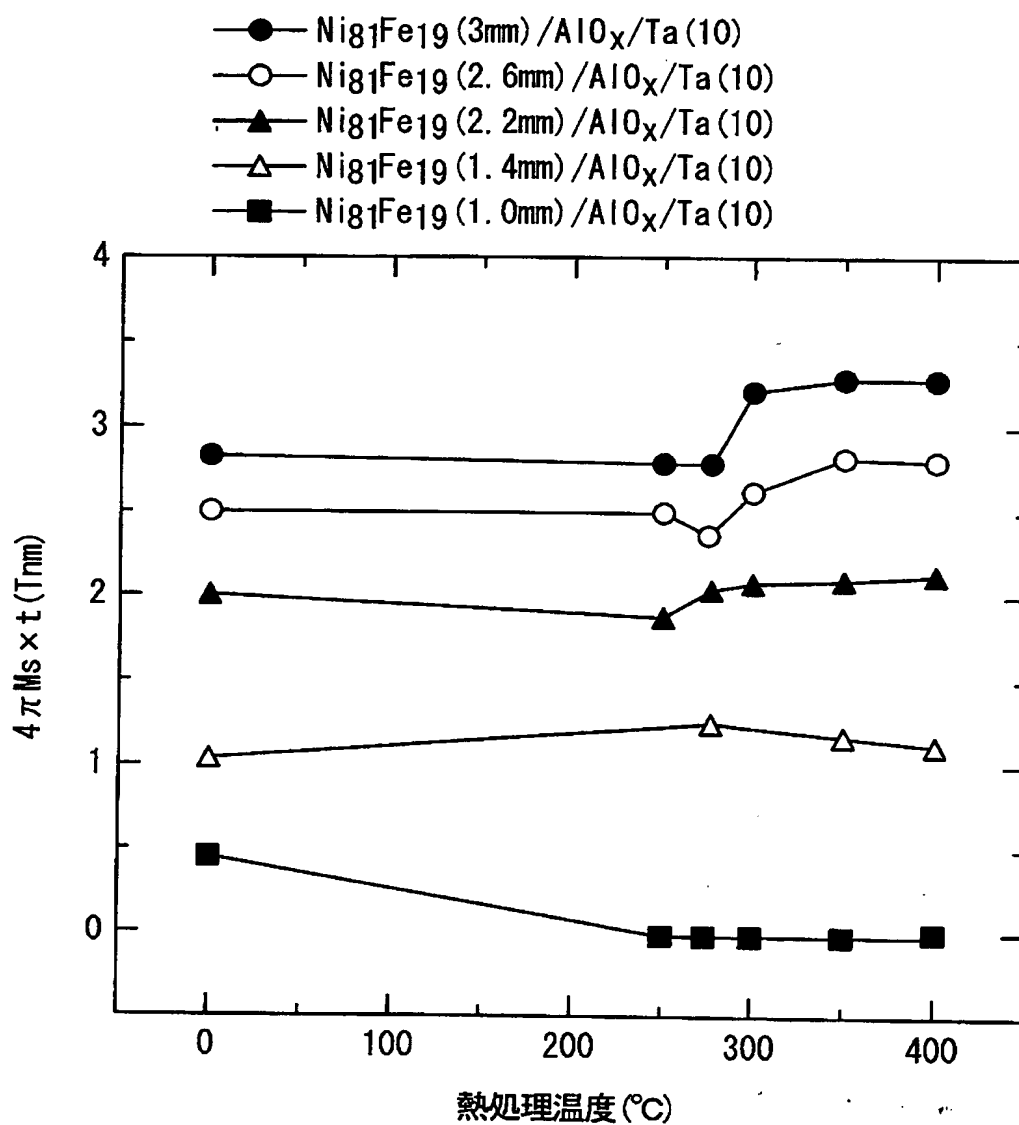


Fig. 37

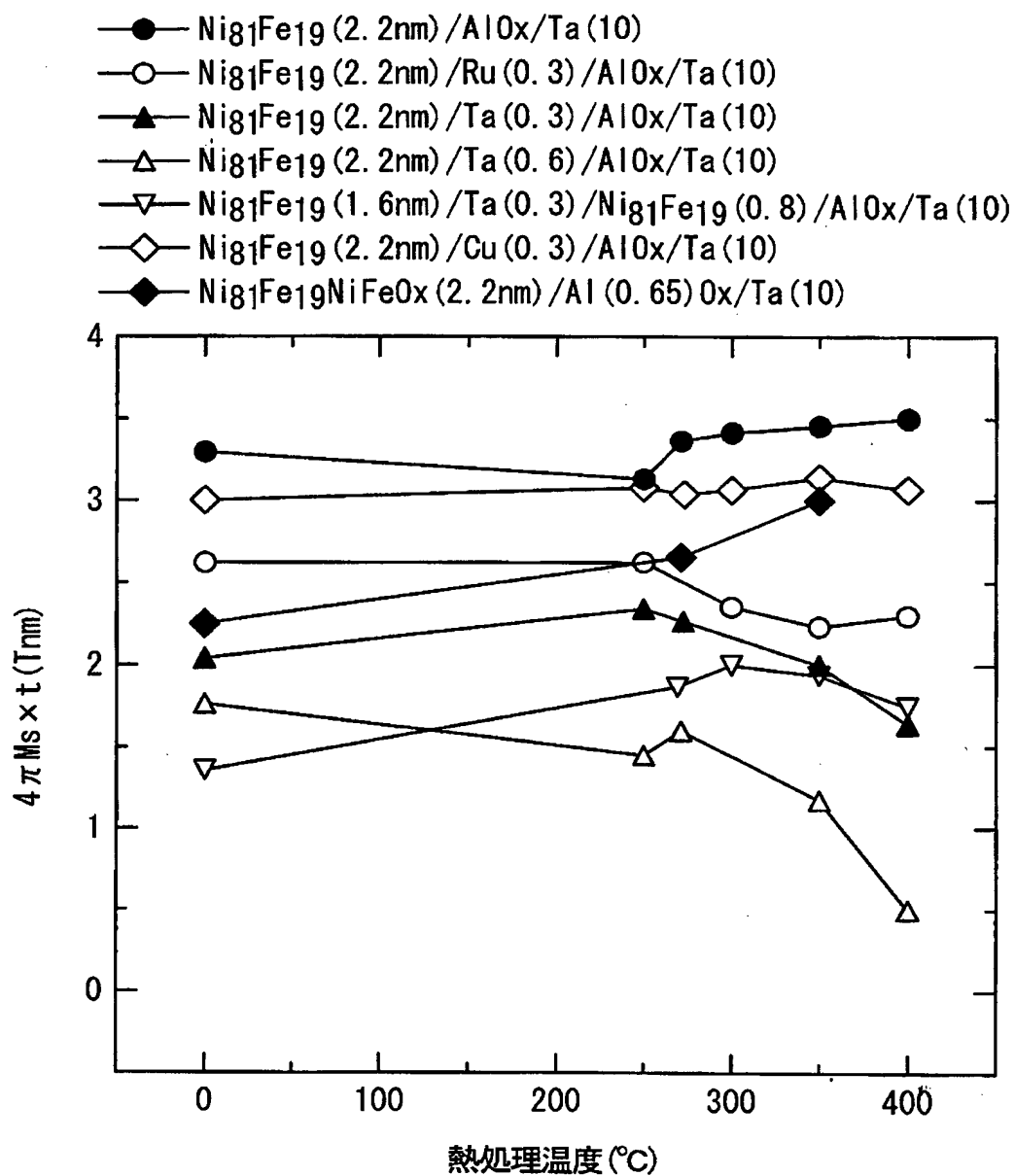


Fig. 38

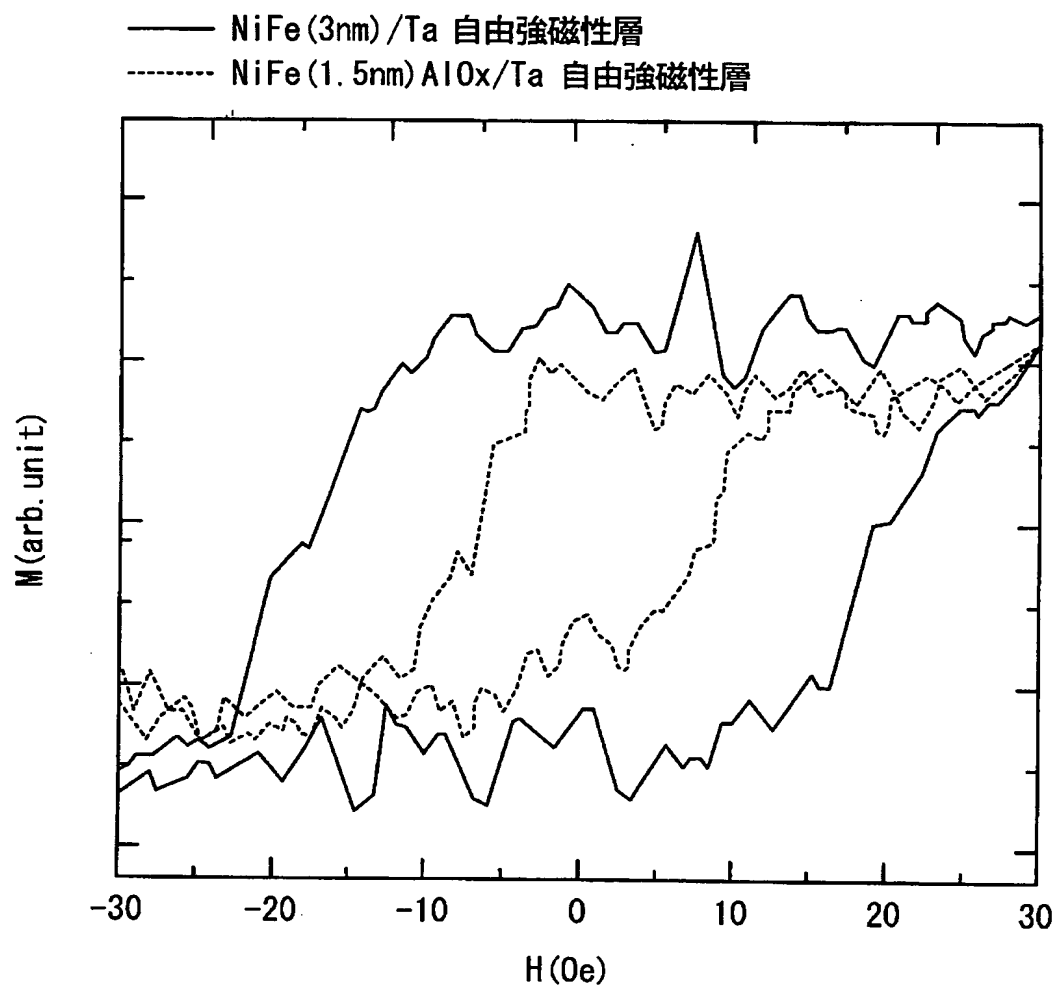


Fig. 39A

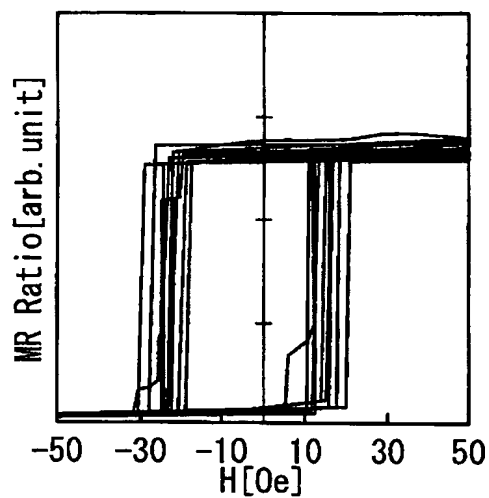


Fig. 39B

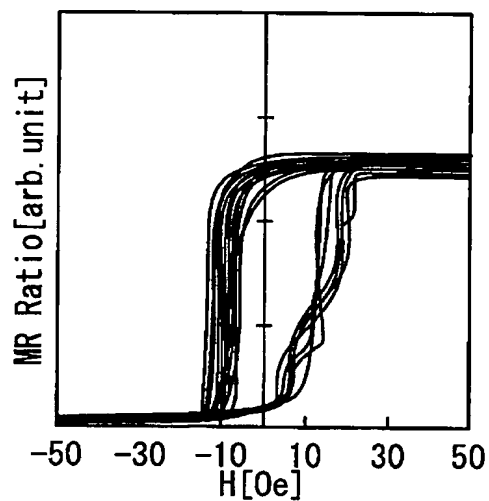


Fig. 39C

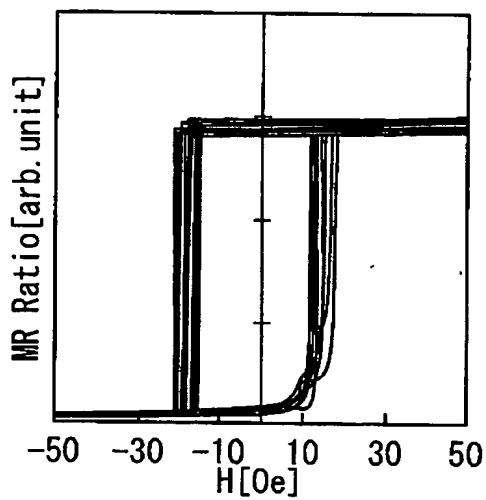


Fig. 40

